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WHAT PROGRESS IN THE NATIONAL YOUTH ADMINISTRATION?

The *School Review* has previously described and commented on the plans announced for the National Youth Administration. Now that several months have passed since its establishment and organization, interested persons (and these should include all who are concerned with the welfare of youth) are wondering how the new administration has fared and how its work has prospered. A picture of the recent status of the program is provided in an article in the *New Republic* by Jonathan Mitchell, who has been giving particular attention to the projects on behalf of youth undertaken by the present national administration. The article, entitled "Without Work Experience"—What Uncle Sam Is Doing for the Nation's Youth," is too long for reproduction in full here, but we are epitomizing portions of it and quoting it in part in order to give some impression of the progress of the program.

A reading of the first several paragraphs of the article yields a feeling of disappointment at the slow development. Obstacles to more rapid progress appear to have been the relatively small allotment of funds for the program and dissension within the ranks of the National Youth Administration.

In the three main jobs assigned to it, namely, giving aid to college students, giving money for carfare and incidentals to high-school pupils, and approving work-relief projects on which the labor of young men and women can be used to advantage, it has done best with the first job, which is virtually a continuation of the aid given last year by the Federal Emergency Relief Administration. At the time Mitchell was writing, the National Youth Administration was helping 104,501 undergraduates in 1,602 institutions with a monthly disbursement of \$1,559,645, as compared with 94,308 undergraduates in 1,465 institutions last year with a monthly disbursement of \$1,414,595. The National Youth Administration also gives aid to graduate students for whom the allowances may be as much as \$20 or \$25 monthly. Mitchell reports that "slightly less than 200,000 high-school students are now being aided by the NYA; exact figures are not available." Description and appraisal of what is being accomplished on the third job we provide through the author's own words.

The NYA's program of youth work projects has a total allotment of \$20,000,000. This compares with \$27,000,000 being spent on educational assistance. There are four main classifications of work projects: urban recreation, employing 55,000; rural recreation, employing 20,000; government apprenticeships, employing 15,000; and government research, employing 4,000; or a total of 94,000 jobs. The basic wage will be \$15 a month. However, where youths are employed on projects on which adults are also working, they will receive "security" wages, but will be permitted to work only a third of an adult's hours, and draw only a third of his pay.

By far the best feature of the work program is that a youth will be permitted to earn money without regard to whether his family is receiving relief funds from other sources. It is unobjectionable for youths of high-school age to be dependent on their parents, but when they are more than eighteen, an intolerable situation is likely to be created. Parents on relief usually resent the sight of these adult-sized boys and girls around the home; the youths, feeling this hostility and knowing their own eagerness for jobs, smart under the sense of injustice. In the practical functioning of the NYA's work program, jobs will be given primarily to children of large families, whose pay will inevitably go to eke out the family income. Nevertheless, even where youths cannot keep any of their wages for their own purposes, the consciousness that they are contributing to the family support will be of immense psychological value.

Because of the unending delays in the NYA's program, regional conferences to approve work projects are only now being held. However, the general character of the projects can be predicted. In the last few years, many communities,

alarmed by the deterioration in their young men and women, have undertaken an amazing variety of youth activities. Apparently the NYA intends to continue and extend such spontaneous community ventures and not embark on new projects of its own. Parenthetically, it may be remarked that these community activities deserve more attention than they have yet had. They form the best evidence of the national determination to force a solution of the whole youth question.

Under the urban-recreation program, a favorite project is likely to comprise cleaning up vacant lots, with the permission of the owners, and transforming them into neighborhood playgrounds. The building of playgrounds in public parks in most cases will fall under the WPA, but small park projects may go to the NYA. Once recreational facilities exist, the NYA will teach youth how to take advantage of them. These projects will employ so-called youth leaders and subleaders, who will supervise classes in a bewildering number of vocational and leisure-time subjects. In general, this instruction will follow orthodox social-work lines. Rural-recreation projects will resemble those of the urban program, except that they will include a greater amount of vocational training—in prevention of soil erosion, use of fertilizers, and reforestation.

The government-apprenticeship projects arise, in part, from Mr. Roosevelt's genuine desire to create a professional civil service, long suppressed out of regard for Postmaster General Farley. State and municipal authorities are being asked to employ youths in the ordinary governmental departments. Among other things, they will be set to making traffic checks, aiding in parole and juvenile-delinquency work, and assisting agencies for health and public welfare. The hope is that through this experience young men and women will acquire a taste for government service and make it their career. The experiment seems likely, however, to turn youths into aspiring ward-healers rather than civil servants of the type common in Europe. Government-research projects are of the same kind and consist largely of unearthing and arranging records of vital statistics and local laws.

In addition to the meagerness of its payments to individuals, and the fact that its program will not reach more than a tenth of those needing help, the chief criticism to be brought against the NYA is that it is doing nothing to hasten a final solution of the youth problem. This is partly an unfair accusation, for the NYA repudiates the idea that it is a policy-making body. Moreover, it must be recognized that all those who fear government domination of education would strenuously oppose its becoming one. Nevertheless, some sort of leadership is required in the present situation, and the NYA is the chief youth agency we have.

A part of the eventual solution, for example, will probably be the raising of the age for leaving school to eighteen years. By its \$6-a-month allowance to high-school students, the NYA is aiding in keeping children in school. However, it is making no effort to face the immense problem of changed curriculums that

will be made necessary by an increase in the school age, nor is it encouraging teachers to draft solutions of their own.

Another part of the problem concerns vocational training. The dangers concealed in vocational-training programs now being carried on by many states were revealed in the recent report to Secretary Perkins and Commissioner Studebaker made by Anna L. Burdick and Ruth Scandrett, who found both misuse of government funds and exploitation of apprentice labor. Vocational training is obviously an extremely critical question, yet the NYA is making no attempt to give the country a lead on what policy should be followed.

A third decision that must be made is whether it is not better for the nation's stability that young men and women, upon reaching adulthood, have first chance at jobs and marriage, even if they displace workers in middle age. The policy of the FERA and the NYA is to encourage private employers to take older workers, but it is hard to find any other basis for this policy than Washington's fear of antagonizing the voting adults. The youth problem is nation wide, and youth will not wait indefinitely. It is possible that the NYA ought not concern itself with broad issues, but if this is so, then some other agency—either inside or outside the government—is urgently needed.

THE FIRST JUNIOR HIGH SCHOOLS

Mild and sometimes uninformed controversies have on occasion been waged over the question of just where in this country the first junior high school reorganization took place. Cities in widely separated sections lay claim to credit for having established the first units of this type. The problem has never been thoroughly investigated, and it is in the interest of stimulating inquiry that the *School Review* reopens the question by reporting fresh evidence concerning the beginnings in one city system which has sometimes figured in the controversies.

Certain of the claims reach back into the last century. For example, Silas Hertzler, writing in the *School Review* in December, 1927, put forward such a claim for Middletown, Connecticut. His article bore the rather assured title "The Junior High School in Connecticut before 1872." We quote significant sentences.

The junior department was first outlined in 1849. By 1851 a three-year course was given in this department of the high school, and a three-year course in the senior department. By 1865 the schools of Middletown were completely graded. A five-year course was given in the elementary grades, followed by three years in the junior department of the high school and by four or five years in the senior department. The higher English course at this time required four years, while

the general and the classical courses were each five years in length. . . . The work in the junior department of the high school included reading, spelling, arithmetic, geography, composition, oral lessons, grammar, and United States history. The work in the senior department of the high school was divided into three courses—general, classical, and English.

It is unlikely that the matter of housing the "junior department" with the high school was prompted by anything more than expediency. The curriculum for this department did not differ in important ways from that in corresponding grades of contemporary elementary schools. There must be grave doubt that the social situation of that early period called for what corresponds to present-day junior high school reorganization.

Readers of the literature on the junior high school will encounter other claims for other units for dates between 1890 and 1909, but the assertions are usually unaccompanied by details descriptive of the program carried on in the schools except to say that the work of instruction was departmentalized. In consequence, there has been some disposition to yield the palm to Berkeley, California, perhaps because the published records are more nearly complete than for other reorganizations. Berkeley has recently celebrated the twenty-fifth anniversary of the establishing of its junior high schools.

The fresh evidence mentioned above relates to Columbus, Ohio, and was supplied by Professor John L. Clifton, of the Ohio State University, who recently made some special inquiry into the reorganizational beginnings in that city. Our informant found that on the front of the present Indianola Junior High School, at Nineteenth and Fourth Streets, is a plaque which proclaims the following:

PRIMUS

Indianola Junior High School organized in September, 1909, at Sixteenth and Indianola Avenues. First of its kind in these United States, was reorganized in this building, September, 1929.

Of course, Professor Clifton did not assume that this statement on a plaque, which was placed twenty years after the date for which claim is made, is conclusive proof of the date of establishment. He had recourse to archives, in particular the minutes of the Columbus Board of Education and reports of the superintendent of schools, J. A. Shawan. The records of meetings of the board show that on

July 6, 1909, the president presented a resolution that the Joint Committee on Textbooks and Course of Study and School Policy consider and report to the board on "the feasibility and propriety of using certain buildings in this city solely for the seventh and eighth grades and for the first class in high school" and "the propriety of classifying such schools as Junior High Schools and of conferring a diploma upon graduates therefrom." At its meeting on July 28 the board is on record as making changes in the boundaries of the Indianola district so as to include certain high-school pupils, "making it possible for the Junior High School at Indianola to be a complete district in itself without the transfer of any pupils from other districts at the completion of the eighth grade." In a description of the boundaries of the Indianola district appearing in the report of the superintendent of schools for 1909, the statement was made that only enough pupils of the first six grades would be admitted to form one class for each grade. The following recommendations contained in the report of the Special Committee on Course of Study, which is quoted in the Clerk's Record for August 16, 1909, gives some indication of the nature of the new curriculum.

2. That the Time Schedules be so arranged for Manual Training and Domestic Science as to interfere as little as possible with the essential studies.

3. That the Superintendent and his assistant be authorized and directed to make such eliminations of topics and parts of topics as will lessen the details which pupils have to take, without weakening their scholarship. In fact, it is the firm conviction of the Committee and the Superintendent's Office, that the scholarship of pupils may be strengthened thereby and time saved for other subjects. A careful examination of the detailed outlines filed with this report will show that such provisions have been made. . . .

5. That Elementary Algebra be introduced into the Eighth Grade "A" as soon as possible. Algebra is universal arithmetic and has its value for the student whether he goes beyond the eighth grade or not.

The entry shows that the motion to adopt the report was carried, the vote being "Yeas, 12," and "Nays, 0." Professor Clifton, in commenting on the action, says, "So far as the Board of Education was concerned, the junior high school was an accomplished fact from the time of the resolution quoted above." Statements quoted by Professor Clifton from the superintendent's reports for 1909 and 1910 indicate clearly that the introduction of the plan was not an affair

of mere expediency in housing. The statements quoted from the resolution and the subjects for each grade listed in the superintendent's report indicate that important changes were made in the curriculum. Included in the report for 1910 is the report of the first principal of the new school, C. H. Fullerton, in which he sets forth at some length the advantages of the junior high school over the traditional organization.

Thus, the fact of the opening of a junior high school in Columbus in September, 1909, seems authentically established. Now, what of the first junior high schools in Berkeley? Fortunately the evidence on this issue is already in. Frank Forest Bunker, superintendent of schools in Berkeley at the time, has himself prepared the record in a bulletin of the United States Office of Education (Number 8, 1916). He states (p. 102) that the plan was inaugurated in January, 1910. In the complete report he indicates that on grounds of expediency the junior units were at first housed with elementary grades, but it is clear that the concept of reorganization on which they were established was far from one of mere expediency. The quibbling partisan is now able to prove that Columbus had its first junior high school in operation before Berkeley. The precedence in time, however, is only a matter of months. Dispassionate observers will be more likely to note that the two systems effected their first reorganizations within the same school year.

We would not contend that these reorganizations in Columbus and Berkeley must stand forever as the first junior high schools to have been established. Instead, we invite readers in touch with claims of other cities to earlier reorganization to submit the evidence, as Professor Clifton has done, but we urge that this evidence include not merely the use of the term "junior high school" but also information concerning the detailed nature of the changes accompanying reorganization. The invitation extends to six-year schools beginning with Grade VII, of which neither the reorganization in Columbus nor that in Berkeley is an example.

NEW PROJECTS FOR THE OFFICE OF EDUCATION

The United States Office of Education has been designated to direct five new projects for the advancement of education which will

be financed through emergency-relief funds and which have been initiated for the purpose of giving employment to more than 3,400 unemployed "white-collar" workers. Commissioner Studebaker will direct the work, practically all of which will be carried forward under the management of state and local educational officials with the Office of Education co-ordinating the enterprises. A total of almost two million dollars has been set aside for the work by President Roosevelt and the officers of the national budget. Brief descriptions of the projects follow. The first project listed is a university research project in which needy unemployed graduates of universities and colleges will engage in a variety of co-operative investigations of important educational problems. Results of the co-operative work will be brought together by specialists in the Office of Education for use throughout the nation. The second is a public affairs forum project which will give the country further demonstration of the Des Moines plan of adult civic education by applying the procedure in a number of other localities. Third is a project investigating opportunities for vocational education and guidance for negroes in approximately 150 communities in 34 states. Fourth is an educational radio project that calls for the establishment in or near Washington of an educational radio workshop staffed by talented workers from such relief groups as the CCC camps and the WPA professional projects. In the fifth and last project named the departments of education in ten states will be enabled to employ emergency workers to collect information about school districts which will provide a sound basis for planning economies and improvements in educational organization and administration.

Further and more detailed announcements have lately been made concerning the project involving forum centers. At a conference of persons prominent in various fields of endeavor, a number of localities of diverse types distributed to many sections of the country were first named as possible demonstration centers. At this writing three of these localities have decided to carry on the demonstration forums, namely, Manchester, New Hampshire; Monongalia County, West Virginia; and Colorado Springs, Colorado. Plans are now being formulated for the spring season in these forums. Another announcement refers to a survey of public forums to be made by the

Office of Education which will gather information concerning forums now under way in the United States.

HERE AND THERE AMONG THE HIGH SCHOOLS

In reporting the items in this recurrent section of the *School Review*, "Here and There among the High Schools," the practice is followed of giving the name of the principal or other person responsible for each innovation described. This practice makes it convenient for readers to write for further information concerning the innovation should they consider adopting or adapting the plans in their own schools. We assume the willingness of our informants to answer questions.

Taking over a page in the local weekly.—Small high schools can seldom swing a school paper. The six-year high school at Yellow Springs, Ohio, with fewer than 150 pupils, has solved the problem by assuming responsibility for matter on the last page of the local weekly newspaper. The page appears as the "Bryan High School Whirligig." According to Clare X. Dowler, who reports the project in a recent number of the *English Journal*, "the school gets no money from the sale of papers . . . on the other hand, the school pays nothing for the printing." The plan, besides serving the useful functions of other school newspapers, gives pupils a much greater incentive to write than does the ordinary school publication; has a positive influence on the social life of the village; aids in welding together school and community; gives the members of the staff a practical lesson in citizenship; and, by a judicious use of quotations, helps to broaden the horizons of persons in the community who read little else than the local paper.

A commemorative issue of a school paper.—A different type of journalistic project is a special centennial issue of the *Blue and White Courier* published by the high school at Fort Lupton, Colorado. The issue, to be published in an eight-page, book-paper edition, will commemorate the hundredth anniversary of the founding of the fort in 1836 by Lancaster P. Lupton. It will contain, among other types of matter, a history of the life of the founder and his family, excerpts from his diary, a communication from a granddaughter of the founder, legends about the fort, a history of the town's progress, descrip-

tions of Indian life, a history of mining in the vicinity, and appropriate pictures. This statement of the project is based on an article concerning it prepared by Frank Burt, a member of the class in journalism in the Fort Lupton High School, which was submitted by Leo W. Butler, superintendent of schools at Fort Lupton.

Unusual commencement exercises.—Programs for commencements of the high school at Holyoke, Massachusetts, during the last four years have centered in the educational program and have, therefore, served to interpret the schools to the community. The exercises of 1932 featured the "Related Arts of Expression," with participation by large numbers of pupils in various literary, musical, and other artistic activities. The exercises for 1933, using the theme "Culture through the Ages," emphasized periods of history. The "Interdependence of Science and Mathematics" was the theme for 1934, the three parts of the program being concerned with "Botanical Symmetry," "Co-ordination of Mathematics and Physics," and "Chemistry—Ancient and Modern." The exercises for 1935 celebrated the tercentenary of American secondary education, the program consisting of two parts, "Public Education in America—Past and Present" and "Public Education in Holyoke—Past and Present." Principal Howard Conant reports that the programs have been well received by the audiences.

Pupils act as teachers' secretaries.—From F. R. Furlong, principal of the high school at Coeymans, New York, we learn that the class in secretarial practice there has organized itself into the Students' Secretarial Service Club. The members of this organization do secretarial work for the principal's office, the teachers, clubs, and other organizations. Each teacher has a "secretary" who is capable of taking dictation and who is also an able typist. The parent-teachers' association and student organizations are also served by this club. The plan gives the pupils more practical experience than could be obtained from classroom work alone.

Boys and girls exchange class periods.—In the West Side Junior High School at Little Rock, Arkansas, of which J. R. Bullington is principal, a group of boys in the practical-arts department in Grade IX B "swap" classes for one period each week with a group of girls in the home-economics department in Grade VIII A. During the

period the boys discuss selection of clothing, table manners, proper conduct for various occasions (especially at parties), introduction of friends, and conversation. The girls, on the other hand, learn some of the simple mechanics of the home and discuss topics like the simple repair of water faucets, electricity and its dangers, installing fuse plugs, repair of light cords, safety rules and traffic laws, and how to drive a car.

Special provisions for character building in junior high schools.—The Kilbourn Junior Technical High School (for boys) in Milwaukee, Wisconsin, maintains a character-building program of slogans, a "character contract," and an honor roll which deserves more extended exposition than can be spared it here. From materials supplied by Principal Don P. Birdsall we understand that during each assembly, held on Fridays, the program chairman calls on pupils or teachers to stand and name some boy who, to a marked degree, has "conquered himself" and brought himself into accord with the best interests of the institution. The "citer" must state what the boy was formerly like and how he has improved and suggest lines of further improvement. He then calls the boy's name, the boy stands, and, by virtue of this act, is considered to have made a verbal contract to continue to improve his character or at least to maintain it at its present level. A blackboard record is kept of these boys, and, at the end of the school year or when the boys leave school, they are awarded "certificates of honor." "An honor roll conducted in the same manner . . . is also maintained to signalize the services of outstanding character of intrinsic worth [of boys] who otherwise might go unheralded and unsung." Details of the daily routine of school life are "delegated pretty largely" to boys who have "made" either the character contract or the honor roll.

In the Roosevelt Junior High School at Decatur, Illinois, one home-room period each Wednesday afternoon is given to the character-building program. A suggested outline for the activity is prepared each month by a "strong, interested faculty committee," but, according to H. F. Carmichael, principal, the pupils carry on most of the work.

Visiting days for elementary-school pupils.—The Memorial Junior High School at Orlando, Florida, provides visiting days for pupils in

Grade VI of each of its four contributing elementary schools. These days are held late in March or early in April. A special schedule of visitation and exposition is prepared by the principal, O. R. Davis, which provides contact of the pupils with features of the school and school life, such as the auditorium, library, shops, home-economics room, projection room, gymnasium, pupil organizations, school routine, program of studies, and honors. In order that confusion may be avoided, the visitors are accommodated in class sections rather than individually or as a single large group, and each section has as guides a boy and a girl from Grade VII who are former pupils of the elementary school attended by pupils of the section. The visiting days are a part of the guidance program of Memorial Junior High School.

NOTES ON "SEX DIFFERENCES IN ACHIEVEMENT IN HIGH-SCHOOL GEOMETRY"

The *School Review* for May, 1935, contained an article by Professor T. G. Foran and Brother Colombiere O'Hara on "Sex Differences in Achievement in High-School Geometry." In it the authors made some reference to previously published materials on the same problem, among them an article by Professor Winona M. Perry, of the University of Nebraska. The statements in Foran and O'Hara's article prompted Professor Perry to submit a communication concerning the method and significance of her study, which we are glad to publish in full.

The authors of the article "Sex Differences in Achievement in High-School Geometry" express certain criticisms of my investigation ("Are Boys Excelling Girls in Geometric Learning?" *Journal of Educational Psychology*, XX [April, 1929], 270-79).

In their first paragraph Foran and O'Hara state: "With a single exception, in a study of doubtful validity, the results point to significant differences in favor of boys." Since validity implies the extent to which the mean measures what it claims to measure, and since my study claimed to measure the increasing number of steps successfully stated and used by boys and girls in their organization necessary to reach a correct solution of a geometric exercise, and since evidence of their successes is presented on pages 272-77 of my article, therefore, the assertion of Foran and O'Hara that my study is of doubtful validity seems unfounded.

Foran and O'Hara also state: "Perry's study is the only investigation that failed to reveal higher achievement scores in geometry among the boys. Since Perry's study was confined to small groups and the conditions were arranged to

evaluate methods of teaching rather than sex differences, the results are unimportant as far as the present problem is concerned." I wish to comment on the statements that the conditions of my study were arranged "to evaluate methods of teaching" and that the "study was confined to small groups." The primary purpose of this investigation was to study and to guide the reactions of boys and girls to geometric exercises in order to increase the proportions of their successful solutions and to determine whether sex differences were revealed in the actual learning. The sizes of the three classes (twenty-nine, thirty, and thirty) and of the ability groupings within each class were small. Nevertheless, they are typical of classes taught today by teachers of high-school geometry. To these teachers the problem of real importance is: To the stimulus, a novel geometric exercise presented in a high-school class, do boys or girls learn to respond the more adequately?

Foran and O'Hara, apparently, experienced similar difficulties, for ten of the groups differentiated by their intelligence-test scores were made up of from ten to nineteen members. Moreover, these authors state that among eighty-five comparisons of critical ratios of the differences between the achievements of boys and girls, seventy-four favor the boys and eleven favor the girls. Of the seventy-four critical ratios favoring the boys are found critical ratios of 0.02 and 0.03! In fact, fifteen ratios were less than 0.50, and fourteen ranged from 0.50 to 0.99. The frequencies of these seventy-four critical ratios follow.

Critical Ratios	Frequency
0.00-0.99.....	29
1.00-1.99.....	20
2.00-2.99.....	11
3.00-3.99.....	9
4.00-4.99.....	4
5.00-5.99.....	1
Total.....	74

Since forty-nine of these seventy-four critical ratios are less than 2.00 (and sixty are less than 3.00), the authors claim merely "consistency of results," but their implication concerning the significance of these results should be considerably diminished.

May I state further that evidence for the conclusions of Foran and O'Hara is derived from their study of pupil responses to the Webb Geometry Test. Parts 2, 3, and 4 of this test have 9, 6, and 5, respectively, as their highest scores. A question may be raised concerning the interpretation of critical ratios based on standard deviations from the means of distributions with so narrow a range of scores. Parts 1-5 of this test measure *results* of thinking but only slightly, if at all, pupils' *processes* of thinking. It does not detect the adequate from the inadequate responses within a partially correct solution of an exercise.

Since my study did detect "those rather subtle factors operative during the actual process of solving exercises in geometry" in the learning of both boys

and girls, Foran and O'Hara's statement that my "results are unimportant as far as the present problem is concerned" seems unwarranted. Furthermore, my finding that the essence of a correct solution of a novel geometric exercise (that is, the "link" step) was recognized and used successfully more frequently by girls than by boys should become an effective guide in the more intelligent individualization of class instruction in geometry. The superiority of girls in comparison with boys was found to be *not in learning capacity but in achieving greater and greater proportion of successes in their adequate responses to the more difficult aspects of geometric exercises.*

PRACTICAL PROPOSALS FOR ILLINOIS

Although Illinois can boast of some outstanding public schools, elementary and secondary, and is one of the wealthiest of states, many of its educational arrangements have long been outmoded and notoriously ineffective. Its school affairs are administered in approximately twelve thousand different districts of many types and sizes, with common-school and overlying high-school districts competing with each other for needed funds. It has had an archaic derivation of school support, relying almost wholly on the general property tax with relatively small contributions toward equalization from state sources. Such weaknesses have been combined with, and in large part perpetuated by, a deplorable lack of central leadership—a lack resulting from the legal restriction of the activities of the state department to matters of minor consequence. The whole system was ripe for collapse in a crisis like that through which the schools of the country have recently been struggling—and the collapse came. It was inevitable that the governor and the legislature should be implored from all corners of the state to consider the predicament of the schools and to do something for them. In the absence of strong central leadership there was confusion of tongues in the proposals for relief and remedy. A legislative commission was appointed to study the needs and propose improvements. Late in July of last year a professional advisory committee to the commission was appointed, consisting of Dean Thomas E. Benner, of the College of Education at the University of Illinois, as chairman, and Professors Eugene S. Lawler, William C. Reavis, and Oscar F. Weber, respectively, of Northwestern University, the University of Chicago, and the University of Illinois.

At this writing the report of this advisory committee has just been

released. It is brief and in other ways is a model of simplicity. It includes three chief recommendations.

1. The establishment of an unsalaried, nonpartisan state board of education (whose executive officer would be the superintendent of public instruction) to advise and inform the people, the general assembly, and the governor as to conditions, needs, policies, and procedures.

2. The establishment of an unsalaried, nonpartisan county board of education, whose executive officer would be the county superintendent of schools, later to be known as the county commissioner of schools.

3. Since wise economy in the financing of public education is dependent on state-wide school organization which provides for continuous study and planning, it is further recommended that legislation concerning problems of school finance follow immediately after the consideration of the foregoing recommendations.

The state board of education recommended would consist of nine lay members appointed by the governor and confirmed by the senate for nine-year terms so staggered that only one vacancy would occur in each calendar year. The discussion of the need of a state board points out that Illinois is one of five remaining states without such a body. An admissible defect exists in having a superintendent of public instruction who is elected by popular vote—and on a partisan ticket—serve as executive officer of the state board, but it is explained that he is so elected by constitutional provision. "As soon as is expedient," says the discussion, "the choice of this important officer should be removed from politics by constitutional amendment permitting his appointment by the state board."

The effect of the second recommendation would be replacement of the present loose organization of diverse districts by the county as the local educational unit. It takes into account the fact that the constitution does not make the position of county superintendent mandatory. The report speaks of "gradual development" of the county unit and urges that establishment of this unit will reduce inequalities between the present smaller local districts. The advisory committee appears to admit that the county may not in some instances be large enough to make the most desirable unit because it says, "When the county has become in fact a school unit in Illinois, provision should be made for the consolidation of counties in case consolidation should be found feasible and desirable."

Although the bare form of the third recommendation seems non-committal on the vital financial issues involved, the discussion in the

report of financial aspects is pointed and constructive. This discussion bears on (1) provision for efficient and economical administration of the program, (2) the guaranty that the available level of support for education shall not fall below a reasonable minimum in any district, and (3) the provision of the needed funds in such a manner that they will be derived equitably from the tax-paying ability of the state.

To persons who have been hoping for thoroughgoing fundamental reform in the educational affairs of the state, the recommendations will fall far short of expectations. The report is, nevertheless, much more practical than would be a recommendation for a complete fundamental reform in that it proposes changes which do not call for constitutional amendments and which in other ways may seem more nearly attainable. It remains to be seen how the report will be received by a legislature which is divided by Chicago—"down-state" conflict and which is more responsive to machine domination than to the needs of the schools. One may at least hope for favorable consideration.

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OUR DUAL SYSTEM OF RURAL EDUCATION

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A generation ago there was a prolonged and bitter struggle over a proposal that a system of vocational schools be developed in the United States which would largely be separate from the existing public-school system. Those favoring the inclusion of vocational education in a unified program of public education won the victory. Even while the fight was being waged, however, another program of public education, largely unnoticed in the discussions of the times, was developing separately from the public schools, namely, the extension program in agriculture and home economics conducted jointly by the United States Department of Agriculture and the land-grant colleges. This separate system of rural education has had a remarkable growth, and it is now possible to study firsthand and on a large scale the problems arising from a dual system of public education, which Judd, Davenport, Bailey, and others who engaged in the earlier controversy could only prophesy.

SCOPE OF THE EXTENSION PROGRAM

In 1934-35, \$26,550,000 was spent in the United States on the extension program. Of this, \$15,500,000 came from the federal treasury.¹ The Seventy-fourth Congress added \$6,000,000 of federal funds to those already available.² A large proportion of the adult farmers of the United States are reached, directly or indirectly, by the extension program. More than a million boys and girls of school age are enrolled annually in 4-H Clubs, which it administers. It conducts the leading program of education for rural youth of sixteen to twenty-five years of age now under way in the United States.

Extension work is no longer closely confined to agriculture and home economics in their narrower connotations. Practically any

¹ The figures are taken from a letter to the writer from C. W. Warburton, director of extension work, United States Department of Agriculture, September 10, 1935.

² Two million dollars became available immediately; the other \$4,000,000 are added at the rate of \$1,000,000 a year.

educational activity of interest to rural people of any age may now be undertaken as an extension activity. Dramatics, music, health education, economics, sociology, and many other fields are drawn on freely in shaping modern extension programs.

RELATION OF THE PUBLIC SCHOOLS TO THE EXTENSION WORK

While some states have done a great deal toward correlating agricultural extension work with their public-school programs, the administrative arrangements for the two are, in general, separate. The extension work is administered at Washington by the Department of Agriculture; the public schools maintain relations with the United States Office of Education. The land-grant colleges direct the state extension programs and, in doing so, usually have no legal responsibility to work with the state departments of education. Separate extension organizations have been set up in most of the agricultural counties of the United States. In about half of the states the separation of extension work from other public educational programs is accentuated by turning over the administration of the extension work to county organizations of farmers. Sometimes this responsibility is the primary interest of the farmers' organization, and sometimes it is subordinate to the other activities for which farmers organize.

EARLIER WARNINGS UNHEEDED

It is strange that such a development should have occurred following the apparent victory in open debate of the principle of educational unity. In order that what is taking place may be made plain, it may be well to go back to the points which our clearest thinkers emphasized in that debate.

In the agricultural-education groups probably no one was more influential than Eugene Davenport, then dean of the College of Agriculture of the University of Illinois. Let us note some of his ideas.

In a system of universal education the best results will always follow when as many subjects as possible and as many vocations as may be are taught together in the same school, under the same management, and to the same body of men. . . .

To teach all subjects to all men in the same school—this is the great educational, social, and economic opportunity of America, where both collegiate and secondary education are in the hands of the general public and not of any sect, class, or

faction. If we throw away this natural advantage, bought with blood and treasure, or if we neglect to make the most of it, we are guilty before the nation and the race of a breach of trust second only to the sin of treason. . . .

I beg you, my fellow-teachers, to study this problem as your religion. The fates have put it upon you to settle. A generation or two and it will be too late. And as you settle it do not shirk labor, do not fly to the separate school because it is easier, but treasure as your life, I beg of you, the universality, the integrity, and the unity of the American educational system.¹

Another of the great agricultural-college directors of that period, L. H. Bailey, of Cornell University, took substantially the same position:

These special schools will undoubtedly be of great value, and they ought to lead the way in a new kind of secondary education; but at the same time we must not forget that we have a public-school system that ought to be developed in these very lines, and it would be a pity to cripple this system by diverting attention elsewhere. We ought not to have duplicate systems of education. . . .

The work [of agricultural teaching] should be guided and supervised by some competent authority or agency, as the state department of public instruction or the college of agriculture, or, preferably, by both, one on the side of administration and the other on the side of subject matter.²

So far as they [the separate schools of agriculture] tend to vitalize, by their example, the whole native school system, insofar will their effectiveness be beyond dispute; and this of itself will be worth all they cost. They will be pioneers. The real and lasting progress, however, is to be made by those localities that first completely redirect the existing schools in the interest of all the people. . . .³

Charles H. Judd, of the University of Chicago, was perhaps the most active of the men in general education in support of an undivided school system. In 1920, long after the principal foray was over, he was still defending his stand when the same issues were raised in the proposed reorganization of educational agencies in Washington:

With these principles we may come to the Vocational Board and those divisions of the Department of Agriculture which are in direct contact with public schools. If these are omitted from the new department of education, I believe it will mean that America has launched on a new policy of public education. Up to this time we have had one undivided school. . . . If the nation is going to launch a divided control along the lines indicated, I, for one, shall do what I can

¹ E. Davenport, *Education for Efficiency*, pp. 17, 33, 59. Boston: D. C. Heath & Co., 1909.

² L. H. Bailey, *The Training of Farmers*, pp. 168, 170-71. New York: Century Co., 1909.

³ L. H. Bailey, *The State and the Farmer*, p. 157. New York: Macmillan Co., 1908.

to draw attention to the fact that the policy is a violation of American spirit and experience. . . .

Our state has, not once nor twice, but again and again, been urged by powerful agencies to subdivide the school system. . . . We are by no means through with this sort of thing in Illinois. I do not believe we are through with it in the nation. I do not believe that a department of education set up in Washington without power to deal with vocational matters is worth discussing. For my part, I shall do what I can to insure a readjustment such that vocational education and general education shall have the same kind of treatment so far as the nation is concerned.¹

The Federal Board for Vocational Education was, of course, later absorbed into the United States Office of Education, but the Department of Agriculture activities to which Judd had reference have remained isolated.

Both the National Education Association and the American Federation of Labor have approved a unified program of public education in formal resolutions.

The National Education Association in 1914 passed the following resolution.

The association views with disfavor any proposal of a parallel system of schools exclusively for the trades and industries at public expense, but favors a comprehensive, unified system of public education, including all types and forms under the single administration of the constituted authorities in charge of the public schools.²

The American Federation of Labor in 1915 recommended:

That all courses in industrial education shall be administered by the same board of education or trustees administering the general education; that no federal legislation on this subject shall receive the approval of the American Federation of Labor which does not require a unit system of control over all public-school studies, general and industrial.³

EFFECTS ON THE SCHOOLS OF SEPARATE - EXTENSION PROGRAMS

The most obvious effect of the separation of school and extension programs has been that the schools have largely left to the extension

¹ Charles H. Judd, "The Federal Department of Education," *School and Society*, XI (June 5, 1920), 670-71.

² *National Education Association Yearbook and List of Active Members*, p. 46. *National Education Association Bulletin*, Vol. III, No. 4 (February, 1915).

³ *Report of Proceedings of the Thirty-fifth Annual Convention of the American Federation of Labor* (1915), p. 323.

work the development of programs of agricultural education. There has been a rapid development of agricultural education in many schools. In the year 1934-35, 5,165 high schools taught agriculture, with federal aid, but there are still about 60 per cent of the rural high schools of America which attempt little in the field of agricultural education.¹ The neglect is greatest in adult education in agriculture, for only about half of the schools having federally aided departments conduct systematic adult classes.

Should the schools continue to show the same deference for the extension service which they have thus far shown, they will soon face the necessity of turning over to the extension administration many of the services formerly performed by the schools, for the scope of extension work, as has been noted, is constantly broadening. Already the general tendencies which Davenport predicted are working themselves out in certain middle western communities. It was his view that, unless the public schools grasped the opportunities for providing new and needed educational services for rural people, separate agencies for providing these services would be set up and the schools would be "stripped first of one opportunity to serve their constituency and then of another, until their usefulness will be lessened, if not entirely destroyed in the eyes of the people, who alone can support them."²

WHY HAS THE SEPARATE SYSTEM DEVELOPED?

It may be profitable to inquire why separate systems of rural education have developed in spite of the fact that the best educational theory seems to oppose separation.

Probably the school men, more than any others, are to blame because they did not see so clearly as did some others the possibilities in adapting traditional educational programs to care for the modern needs of rural people. In the early days of extension work the inclination of extension workers was to work through the schools. Many of these pioneer extension teachers had themselves been public-school teachers. They were, however, so often repulsed by the

¹ Sherman Dickinson, "Needed Adjustments and Direction in Vocational Agriculture." Address given December 7, 1935, before Agricultural Section, American Vocational Association. Columbia, Missouri: Department of Agricultural Education, University of Missouri, 1935 (mimeographed).

² E. Davenport, *op. cit.*, p. 30.

local school officials and were so often better received by farm people that they began to go around the schools and to deal directly with farmers, attaining far better results than they had formerly secured.

The organization of rural education in small units also stood in the way of developing an extension program through the schools. The number of extension workers has always been small, and it has been necessary for a single worker to cover a relatively large area. The county has usually been the smallest unit for extension work. Few county school organizations have been capable of sponsoring programs of the sort found feasible by the extension administration.

The traditional isolation of the land-grant colleges from other branches of education, necessary at first to enable a new type of education to gain a foothold, has been another factor in the development of separate programs below the college level.

ATTEMPTS AT CORRELATION

While there is much that is discouraging in the situation which has been described, there are under way some promising attempts at correlation of school and extension activities.

The National Advisory Committee on Education recommended in 1931 that an inter-departmental council on education be established among the departments of the federal government, which would, among other things, secure better correlation of the educational activities of the Department of Agriculture and those of the Office of Education.¹ The American Country Life Association has considered favorably the establishment of a "Co-ordinating Committee on Rural Education in the United States."² Iowa State College of Agriculture and Mechanic Arts has made a systematic review of its extension program with special attention to its public-school relations.³ A number of land-grant colleges have adopted practical devices for co-ordinating the federally aided activities in and out of the public

¹ National Advisory Committee on Education, *Federal Relations to Education*, Part I, p. 96. Washington: National Advisory Committee on Education, 1931.

² Richard E. Jagers, "Co-ordinating Rural Education Programs," *Rural America*, XIII (January, 1935), 13.

³ J. Brownlee Davidson, Herbert M. Hamlin, and Paul C. Taff, *A Study of the Extension Service in Agriculture and Home Economics in Iowa*. Ames, Iowa: Collegiate Press, Inc., 1933.

schools.¹ Colvin, following an extensive study, has recently recommended that "the rural-education projects which are supported in part from state and federal funds should be grouped under one administrative head."²

Perhaps the desired outcomes can be secured without administrative regrouping. If there is administrative integration of the two programs, each will have to be allowed a considerable degree of autonomy and the privilege of using varying procedures in attaining the general ends sought. Education is not yet at the point where it is safe to standardize procedures. The extension work has had an unusual degree of freedom, which it has used advantageously in developing many fruitful new procedures.³ School people should not try unduly to make it conform to their own preconceptions of education. On the other hand, the extension work would profit from closer association with the other branches of public education. The schools need badly the stimulating influence of extension workers. Bailey's suggestion, made nearly a generation ago, that the land-grant colleges provide subject-matter supervision of some of the subjects taught in rural schools has recently been found highly feasible and desirable.⁴

It seems clear that eventually the schools ought to be the local outlets for extension service and that no rival organizations should be maintained. It might also be expected that in time each state will organize its educational activities under one state board of education, which will direct collegiate and precollegiate education alike. The end point in the organization of federal educational activities appears to be their grouping under an autonomous Office of Education rather than their continuation as propaganda agencies for the various governmental departments. If these are the desired ends, educators should do what they can toward inaugurating the intermediate steps toward attaining the goals.

¹ H. H. Kildee and H. M. Hamlin, "Correlating the Work of Agricultural Colleges and Smith-Hughes Schools," *Proceedings of the Forty-eighth Annual Convention of the Association of Land-Grant Colleges and Universities* (1934), pp. 130-33.

² Carl Colvin, *A Study of Rural Education in Illinois with Special Reference to Vocational Agricultural Education for the Fifteen Year Period, 1917 to 1932*, p. 11. Abstract of Doctor's Thesis, University of Illinois, 1934.

³ See the author's more detailed statement on this point in E. George Payne (editor), *Readings in Educational Sociology*, II, 527-32. New York: Prentice-Hall, Inc., 1934.

⁴ J. Brownlee Davidson, Herbert M. Hamlin, and Paul C. Taff, *op. cit.*, pp. 156-57.

COMPARISON OF PRINCIPLES AND PRACTICES OF STUDY

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STATEMENT OF THE PROBLEM

Academic achievement is largely dependent on the skill with which a person handles the techniques of study. He is compelled to use these procedures and devices if he would be efficient in scholastic endeavors whether in or out of school. His whole academic life turns about this pivotal point. Yet how many pupils at any grade level are taught efficient methods of study? Many pupils seem to be unacquainted with those principles that are considered basic for effective study techniques, and still fewer are given instruction in proper methods of study through practice.¹ In view of the fact that there is little systematic instruction along these lines, it would seem desirable to determine the extent to which pupils follow the rules set up in numerous manuals as effective study principles. If the techniques implied by these principles are already used by the majority of pupils, teachers need not be greatly concerned about instruction in how to study. On the other hand, if many pupils are not inclined to use some of the really vital principles, the need for a systematic and concentrated effort toward guidance at these points is implied.

If an adequate comparison is to be made between study habits of pupils and generally recognized principles of effective study, it is necessary (1) to make an analysis of widely used manuals on study

¹ Evidence for this statement will be found in many of the sources cited in three comprehensive, annotated bibliographies of study problems by Maxie N. Woodring and Cecile White Flemming, "A Partial Bibliography on Study," *Teachers College Record*, XXIX (February, 1928), 417-44; "A Supplementary Bibliography on Study," *Teachers College Record*, XXXIII (March, 1932), 515-32; "A Third Bibliography on Study," *Teachers College Record*, XXXVI (February, 1935), 397-408.

See also Ruth Strang, "Another Attempt To Teach How To Study," *School and Society*, XXVIII (October 13, 1928), 461-66.

methods for determining the principles considered important, (2) to investigate thoroughly the study habits of a group of pupils, and (3) to compare the techniques utilized by these pupils with those recommended in the manuals.

ANALYSIS OF STUDY MANUALS

For the purpose of securing a list of the important principles of study, an analysis was made of five well-known study manuals.¹ The principles mentioned by each author were carefully outlined, and a check was made of the number of authors advocating each principle. Those principles mentioned by at least four of the five authors were chosen for investigation. However, since time and facilities were lacking for collecting data relevant to the use of some of these principles, not all are included in the comparisons made in this article.

THE SELECTION OF PUPILS

It was decided to limit the group of pupils to a number which would permit intensive investigation. The pupils were selected from a rural six-year secondary school in Ohio. This school is used as a university demonstration school and employs an unusually capable staff of teachers. The twenty-two pupils (ten boys and twelve girls) were selected in such a way as to be wholly representative of all pupils in this school with respect to intelligence, achievement, and studiousness. Intelligence was measured by the use of a mental test, achievement by the average of the high-school marks earned in the academic subjects during a complete school year, and studiousness by the use of Symonds' technique known as the "studiousness index."² This last measure is so arranged that a pupil who is achieving about as well as he can be expected to achieve on the basis of an

¹ a) Claude C. Crawford, *The Technique of Study*. Boston: Houghton Mifflin Co., 1928.

b) Arthur W. Kornhauser, *How To Study*. Chicago: University of Chicago Press, 1924.

c) Leal A. Headley, *How To Study in College*. New York: Henry Holt & Co., 1926.

d) Luella Cole Pressey and Jessie Mary Ferguson, *Students' Guide to Efficient Study*. New York: R. R. Smith, Inc., 1931.

e) Guy Montrose Whipple, *How To Study Effectively*. Bloomington, Illinois: Public School Publishing Co., 1927 (revised).

² Percival M. Symonds, *Measurement in Secondary Education*, pp. 521-25. New York: Macmillan Co., 1927.

intelligence-test record will have a studiousness index of 50. Half, or eleven, of these pupils ranked below this point in studiousness and are known here as "poor" pupils, and eleven others were at or above this point and constitute the group of "good" pupils.

The means of these measures and the grade level for these pupils are given in Table I. The average of the whole group on studiousness was near the expected figure of 50. The range of indices was 34 to 68, with a fairly even distribution throughout the range. It is clear that there was a distinct difference in the studiousness of the good

TABLE I
COMPARISON OF MEANS OF VARIOUS MEASURES FOR ELEVEN
GOOD PUPILS AND ELEVEN POOR PUPILS

	Good Pupils	Poor Pupils	Both
Age in years.....	15.0	14.3	14.7
Grade.....	8.3	9.3	8.8
Intelligence quotient.....	93.6	108.3	101.0
School mark [*]	2.8	2.1	2.5
Studiousness index.....	60.1	38.7	49.4

* A = 4, B = 3, C = 2, D = 1.

pupils and the poor pupils. The mean intelligence quotient for the entire six-year high school was 102.1 with a standard deviation of 12.4. For the group of twenty-two pupils used in this study, the mean was 101 with a standard deviation of 12.6. Thus, this group was representative of the pupils of the school in academic ability.

METHODS OF INVESTIGATION

In the study hall two observations of each pupil were made for the purpose of securing information concerning his powers of concentration. The method used was that suggested by Morrison.¹ Each pupil was also observed for two periods in classroom situations for the purpose of determining his attitudes and the extent of his participation in the class. A comparison of ten records of a second classroom observer with those of the original observer showed an

¹ Henry C. Morrison, *The Practice of Teaching in the Secondary School*, pp. 135-50. Chicago: University of Chicago Press, 1926.

agreement of 63 per cent with regard to the significant details of attitudes and participation.

Each pupil was interviewed individually for a period of thirty-five or forty minutes in order that additional data about his study habits might be secured. The interview was based on a series of questions compiled from the principles of effective study suggested by a majority of the authors of the study manuals. The pupil was encouraged to talk freely, and he often added significant information which would not have been secured through a questionnaire. A written record was made as the interview proceeded.

At the conclusion of the interview the pupil was requested to fill in a questionnaire which dealt mainly with his customary habits of home study and the environmental situation therein involved. The blank was filled out in the presence of the interviewer in order that the pupil might receive any necessary assistance in interpretation and in order that a feeling of greater conscientiousness in response would be created. The percentage of agreement between two sets of these questionnaires filled out by twenty-nine other pupils at two different times was 68.

A second questionnaire completed by each pupil was designed to secure information concerning his interests in various study techniques. This device was an adaptation of a questionnaire used by one of the writers in a previous study,¹ but for a different purpose. It provided a means whereby each pupil could check the extent to which he liked each of fifty factors related to methods of studying.

A third questionnaire was combined with the test used to measure the knowledge of principles of effective study. This test was of the multiple-choice type following the pattern of that used by Strang.² Each of the twelve items contained a choice of four procedures, one of which was considered the most suitable on the basis of the analysis of study manuals. Each pupil was asked to mark with a *B* the principle which he considered the best for use and with a *U* the one that he most frequently used in a particular situation. These pupils indicated that they used the technique which they considered best

¹ C. O. Mathews, "The Effect of the Order of Printed Response Words on an Interest Questionnaire," *Journal of Educational Psychology*, XX (February, 1929), 128-34.

² Ruth Strang, *op. cit.*

in only 17.8 per cent of the possible instances. This fact, together with the correspondence between their answers and certain observations of their study methods, seems to justify the opinion that their responses were truthful.

PRINCIPLES AND PRACTICES COMPARED

The principles that were investigated in this study are shown in Table II. The information collected from each pupil by means of the various methods mentioned was carefully analyzed for the purpose of determining which of the widely accepted principles of effective study each pupil seemed to be employing. A principle was considered as being employed if the pupil apparently utilized it a majority of the time; otherwise, it was recorded as not being employed. The thirty-seven principles in Table II are arranged in six classifications as an aid to interpretation and discussion.

Eighteen of the principles were employed by more than 50 per cent of the total group of pupils and nineteen of them by less than 50 per cent. Twenty-seven of the principles were used more frequently by the good than by the poor pupils, six were employed equally by the two groups, and four were utilized more frequently by the poor pupils. It is probable that some of these differences are not significant, but the number of cases involved did not justify the computation of the statistical reliability of the differences. However, there can scarcely be any doubt that good pupils employ many more of these principles of efficient study than do poor pupils.

When attention is given to each classification of Table II in turn, it will be noticed in the first series of principles that most of these pupils tried to make sure that they knew what they were to do when they began studying a lesson. The good pupils seemed to consider the preparation of each lesson as a goal to be obtained, while this point of view was not held by the poor pupils. It is probable that only a few pupils of either group had a clear conception of the more distant goals toward which the immediate work was directed.

Insofar as providing the situation for study is concerned, the most noticeable differences between the good pupils and the poor pupils were that the former more often had definite times and places for study and that they arranged to have conveniently at hand the

TABLE II
PERCENTAGES OF GOOD PUPILS AND OF POOR PUPILS USING
CERTAIN GENERALLY ACCEPTED PRINCIPLES OF STUDY

Principle of Study	Percent- age of Good Pupils	Percent- age of Poor Pupils	Differ- ence in Favor of Good Pupils	Average of Both Groups
I. Understanding the goal:				
1. Define the task (accurate knowledge of assignment)	100	91	9	95
2. Regard preparation of assignment as a goal	45	0	45	23
3. Break down task into partial goals if it seems overwhelming	9	0	9	5
II. Providing the situation:				
4. Have schedule for school study	82	55	27	69
5. Have schedule for home study	45	27	18	36
6. Have definite place for home study	73	55	18	64
7. Use same table and chair of correct height every time	18	36	-18	27
8. Arrange for light over shoulder	36	55	-19	45
9. Be comfortably warm	73	73	0	73
10. Have study supplies at hand	91	55	36	73
III. Assuming favorable attitude:				
11. Feel interest in school task	91	36	55	64
12. Feel intensely the necessity of doing these tasks	100	91	9	95
13. Attempt to check mind wandering	91	82	9	86
IV. Employing acquisition procedures:				
14. Become acquainted with an entire reading assignment at outset by scanning the headings, general outline of the author, etc.	36	27	9	32
15. Get main thought of each paragraph as reading proceeds	45	36	9	41
16. Make notes of reading	9	0	9	5
17. Underline important points in book or make notes in margin	18	9	9	14
18. Make outlines, draw diagrams, write essays to understand thoroughly materials read	9	18	-9	14
19. Think of illustrations and examples	55	36	19	45
20. Tie new information to old	55	36	19	45
21. Treat the author critically	55	36	19	45
22. Pay attention to headings, italics, and other printed devices	100	82	18	91
23. Discover meaning of all technical words	82	36	46	59
24. Get meaning of whole passage to be memorized	36	0	36	18
V. Employing review and "fixing" procedures:				
25. Make effort to enlarge reading, speaking, and writing vocabularies	55	27	28	41
26. Use knowledge newly acquired	100	91	9	95

TABLE II—*Continued*

Principle of Study	Percent- age of Good Pupils	Percent- age of Poor Pupils	Differ- ence in Favor of Good Pupils	Average of Both Groups
27. Talk over what is learned with others.	45	45	0	45
28. Use knowledge to explain facts and foresee consequences.	55	55	0	55
29. Make mental or written outline of ma- terial, reviewing with this outline in mind.	64	27	37	46
30. Try to anticipate examination ques- tions.	82	55	27	69
31. Avoid high-pressure reviewing at last minute.	91	55	36	73
VI. Taking examinations:				
32. Be cool and confident.	73	73	0	73
33. Trust your memory.	64	45	19	55
34. Read over whole examination and think about each question before be- ginning to write.	27	27	0	27
35. Read each question carefully before answering it.	100	100	0	100
36. Make mental or written outline for answering each question.	9	45	-36	27
37. Pay particular attention to English and spelling.	91	45	46	68

needed supplies. Since most of these pupils lived in rural homes, the situation and facilities for home study were not highly favorable. Only 55 per cent of these homes had electric lights, and only 18 per cent had furnaces. Fifty-four per cent of these pupils stated that they "always" or "usually" studied in a room where other members of the family were talking or moving about or where the radio was turned on.

The attitudes of the good pupils toward school and study seemed more favorable than those of the poor pupils. In fact, the largest difference for the thirty-seven principles was the difference on the item "Feel interest in school task." The poor pupils felt the *necessity* of doing these tasks, but apparently they had little inherent interest in doing them.

The good pupils showed more interest in using accepted principles of study. The results of the questionnaire designed to show the extent to which these pupils liked each of fifty factors related to meth-

ods of studying indicated that the good pupils had more favorable attitudes than had the poor pupils in forty-one out of the fifty possibilities.

Only two of the principles in the fourth section of Table II were employed by over half of these pupils. There was no great inclination to get a bird's-eye view of an assignment before reading, to make notes on reading, to underline in books, to make outlines, to think of illustrations, to tie new information to old, and to treat authors critically. The differences between the good and the poor pupils were relatively small in respect to all except two of this group of principles, namely, discovering the meaning of technical terms and getting the meaning of a whole passage to be memorized.

Much improvement also could have been made by these pupils in the use of review and "fixing" procedures. Most of the pupils seemed to put to some use their newly acquired knowledge, to make outlines for review purposes, to try to anticipate examination questions, and to avoid cramming. More of the good pupils attempted to enlarge their vocabularies, and more of them seemed to utilize the last three of the principles just mentioned.

Little attention has been given by most teachers to instructing pupils in methods of taking examinations. Some of these pupils showed evidences of emotion and a lack of self-confidence, although nearly three-fourths (73 per cent) confessed to self-composure. Only 27 per cent of the total group, and a smaller percentage of the good than of the poor pupils, seemed to practice planning their answers adequately before writing on a given question. The poor pupils paid less attention to English and spelling than did the good pupils.

CONCLUSIONS

Many of the principles of effective study set forth in widely used manuals on study methods were not employed extensively by a representative group of children in a six-year high school located in a rural community which employs superior teachers. Most of the principles were employed more frequently by the good pupils than by the poor pupils.

Perhaps these findings constitute a type of validation for such principles and techniques of study, but there is need for extensive

experimentation under controlled conditions for the purpose of determining which techniques and principles are reasonably effective. Since a given principle may not be equally effective with all pupils or in all subjects, such experimentation will necessarily be complex and expensive.

If these principles are in accord with the present best knowledge of educational psychology, the question naturally arises: Why are they not more widely employed by high-school pupils?

The test of knowledge of principles of effective study showed that in only 58 per cent of the situations was the best alternative procedure (according to authorities) known by these pupils. In only 21 per cent of the possible instances was this procedure the one usually employed, and in only 17.8 per cent of the instances did these pupils employ the procedure which they themselves thought best.

Such findings as these lead to at least two conclusions: (1) Many of these and perhaps thousands of other high-school pupils do not know the best principles and procedures for effective study. (2) A mere knowledge of these principles is insufficient to insure efficiency in study. It would seem that one of the prime responsibilities of high-school principals and teachers should be to assist pupils to acquire this life-time equipment by providing rich opportunities for actual practice in efficient study methods under the skilful supervision of teachers who are themselves competent students.

AN ATTEMPT TO USE THE BELL ADJUSTMENT INVENTORY FOR HIGH-SCHOOL GUIDANCE

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Recent emphasis on guidance has tended to stress increasingly the fact that adjustment is a much broader problem than mere subject-matter achievement in relation to ability. Thus McKown¹ discusses, among other problems, guidance in citizenship, personal relationships, health, and manners and courtesy. Koos and Kefauver,² though emphasizing other aspects, also pay considerable attention to adjustment of this nature. They touch on the problem with which the present study is concerned in saying that satisfactory instruments for measuring degrees of adjustment are not yet available.

The literature of educational psychology and the literature specifically concerned with behavior problems stress the major importance of emotional, social, and health adjustment.³ It needs no comprehensive survey of the literature to prove that such aspects of adjustment are of universal concern to high-school teachers. However, means of determining degrees of social and emotional maladjustment or of securing data concerning pupils showing maladjustment seem as yet fairly limited. In well-equipped schools the health status of the pupil may be determined rather accurately, but the effect on his personality of problems of health adjustment is not so readily discovered. Data concerning home adjustment, social adjustment, and emotional adjustment must be secured either by home visitation or by accepting the opinions of teachers most closely associated with the pupil. This article presents the outcomes of an at-

¹ Harry C. McKown, *Home Room Guidance*. New York: McGraw-Hill Book Co., Inc., 1934.

² Leonard V. Koos and Grayson N. Kefauver, *Guidance in Secondary Schools*, pp. 363-64. New York: Macmillan Co., 1932.

³ See, for example, (a) Douglas A. Thom, *Normal Youth and Its Everyday Problems*. New York: D. Appleton & Co., 1932; (b) S. L. Pressey, *Psychology and the New Education*. New York: Harper & Bros., 1933.

tempt to determine the utility of the Bell Adjustment Inventory as an instrument for diagnosing pupil adjustment.

In September, 1934, the Bell Adjustment Inventory was administered to eighty-five pupils attending Oread Training School at the University of Kansas. It was purposed to discover, if possible, the reliability and the validity of this test when applied to pupils of high-school age. Six months later the test was again administered to the same pupils in order that comparisons might be made between the results of the two applications and that these results might be compared with other known criteria. Seventy-eight pupils of the group participated in the experiment both times.

TABLE I
CORRELATION OF SCORES ON FIRST AND
SECOND ADMINISTRATIONS OF BELL
ADJUSTMENT INVENTORY

Phase of Adjustment	Correlation
Home.....	.851
Health.....	.741
Social.....	.832
Emotional.....	.788
Total score.....	.823

Some changes in scores were observed in the results of the two applications. Five pupils had the same total scores on the two administrations of the four adjustment categories—home, health, social, and emotional adjustment. The total scores of forty pupils showed improvement on the second application; thirty-three scores indicated poorer adjustment on the second testing than on the first. On the two applications thirty-two pupils had a difference in total score of only five points or less; nineteen pupils had a difference of ten points or more, six of which were as much as twenty or more points.

It is reasonable to suppose that in an inventory of this type pupils might vary in their judgments by a few points after a period of six months had elapsed even if there had been no change in the degree of their adjustments. Where the variation was as great as twenty points, it is also reasonable to suppose that there had been at least some actual change in the degree of adjustment. The mere fact of change or variation in the results of the two applications does not in

itself indicate that the Adjustment Inventory is unreliable or invalid. The correlation coefficients between the scores on the two administrations of the Adjustment Inventory, presented in Table I, indicate a satisfactory degree of reliability for this instrument.

In order to provide a criterion with which to check the validity of the Adjustment Inventory, the writers requested the supervisors and teachers of the pupils tested to rate the pupils in regard to their home, health, social, and emotional adjustments. Fifteen persons participated in the rating, each rater being asked to make a rating for pupils whom he had had in class for a semester, with whom he had worked in extra-curriculum activities, or whom he had known intimately or socially out of school. Each of the phases of personal adjustment—home, health, social, and emotional—was rated on a seven-point scale listing the following graduated amounts of adjustment: "Perfectly adjusted," "Very well adjusted," "Well adjusted," "Fairly well adjusted," "Poorly adjusted," "Very poorly adjusted," and "Seriously maladjusted." With no knowledge of the results on the Bell Adjustment Inventory and with no advance knowledge of the fact that they were to make two judgments, the teachers made a second rating thirty days after the first. A condensed set of directions given for rating follows.

It is hoped to get as many ratings as possible concerning personal and social adjustment of every student at Oread. Teachers who have had a student in a class for a semester, or have worked with him in extra-curriculum activities, or have known him intimately or socially out of school will be qualified to rate him.

The categories on which the rating is to be based are: home adjustment, health adjustment, social adjustment, and emotional adjustment. In order that the raters may have some common basis from which to make judgments, some symptoms suggestive of poor adjustment are listed for each category.

Home Adjustment

Has the student—

- any unhappy relationship with any family member?
- known the lack of ordinary home necessities?
- experienced unreasonable restriction or domination by either or both parents?

Health Adjustment

Has the student—

- any apparent ailment, such as hay fever, headache, tonsillitis, indigestion, eyestrain, deafness, teeth defects, etc.?

at any time been greatly underweight or overweight?
had any physical injuries or surgical operations?

Social Adjustment

Has the student—

any initiative for becoming acquainted with interesting people?
usually been self-conscious in class or with groups not so well known to him?
any capacity for directing people, or is he shy and timid and avoids meeting people?

Emotional Adjustment

Has the student—

been easily discouraged, depressed, excited, angered, upset, or worried?
a tendency to nervousness, or nervous parents?
fears of things not really harmful?

The coefficients obtained by correlating the first and the second ratings of individual raters² are presented in Table II. These coefficients show a fairly high degree of reliability in judgments of pupil adjustment. This statement seems the more probable when it is considered that the traits judged are not necessarily constant and that, after having once rated the pupils, the judges would likely be more observant of the pupils' adjustment and might be better able to judge them in a second rating. Thus, the scores might legitimately be changed. The correlation of the averages of the first and second ratings on each phase of adjustment compares favorably with the reliability coefficient obtained for the Bell Adjustment Inventory.

Under the assumption that the ratings are valid, the results from them may be used in checking the validity of the Adjustment Inventory when applied to a group of high-school pupils. The coefficients obtained by correlating the averages of the ratings with the averages of the Inventory scores are shown in Table III. On both the first and the second ratings and scorings these correlations are low. The correlation of the averages of the first and the second ratings with the averages of the first and the second Adjustment Inventory scores produced an even lower coefficient (.132). If the ratings are highly valid, then it follows that the Adjustment Inventory does not possess a high degree of validity.

² See Austin H. Turney, "A Study of the Reliability of Judgments in Relation to the Certainty of the Judgments, to the Interval between Judgments, and to the Number of Subjects Judged," *Journal of Applied Psychology*, XV (June, 1931), 259-72.

TABLE II

CORRELATIONS BETWEEN FIRST AND SECOND RATINGS MADE BY INDIVIDUAL RATERS ON FOUR PHASES OF ADJUSTMENT OF PUPILS*

RATER	RATINGS ON							
	Home Adjustment		Health Adjustment		Social Adjustment		Emotional Adjustment	
	Number of Cases	Correlation	Number of Cases	Correlation	Number of Cases	Correlation	Number of Cases	Correlation
A.....	85	.822	85	.500	85	.651	85	.603
B.....	65	.739	65	.795	65	.835	64	.877
C.....	70	.750	70	.593	70	.683	70	.374
D.....	58	.691	58	.843	59	.804	59	.759
E.....	45	.848	45	.851	45	.811	45	.761
F.....	39	.673	43	.711	43	.728	43	.634
G.....	15	.533	48	.796	48	.880	48	.759
H.....	0	.....	40	.646	36	.580	34	.505
I.....	43	.674	44	.346	44	.823	44	.606
J.....	27	.377	27	.632	26	.555	26	.850
K.....	8	.889	29	.797	29	.908	29	.824
L.....	15	.860	15	.707	15	.678	15	.670
M.....	0	.....	0	.....	17	.785	12	.794
N.....	4	1.000	13	.917	13	.991	13	.947
O.....	0	.....	7	.697	7	.929	7	.936
Average†.....	.....	.757	.....	.774	.....	.827	.....	.869

* The Otis correlation chart was used except where the number of cases was less than twenty, when the rank-difference method was used.

† The correlation of the total average scores on the first and the second ratings was 0.741.

TABLE III

CORRELATIONS OF INDIVIDUAL RATINGS WITH SCORES ON BELL ADJUSTMENT INVENTORY

Phase of Adjustment	Correlation of First Rating and First Score	Correlation of Second Rating and Second Score
Home.....	.178	.294
Health.....	.416	.316
Social.....	.274	.311
Emotional.....	.295	.302
Total score.....	.279	.215

The writers are not contending that the Adjustment Inventory lacks validity. The problem that they wish to raise is a practical one. When teachers have once formed opinions concerning the adjustment of a pupil, they are slow to change their opinions because of any contrary evidence produced by the Adjustment Inventory. Even though their acquaintance with a pupil is meager, as it must be when developed almost entirely, if not wholly, in school situations, teachers too often show a tendency to consider their judgments as certain.¹ It seems evident that, unless a measuring instrument like the Adjustment Inventory has proved validity of an unquestioned nature, it can be of little use to teachers in guidance. The experience of the writers seems to indicate that, before teachers will be able to contribute much toward valuable guidance, they must have more and better training than most of them now have. There is obviously also a need for much experimental work with the aim of developing more objective instruments for measuring adjustment or maladjustment. It may be questioned, however, whether this type of work will become functional in teachers' attempts at guidance until their training includes a different approach to the problem. As matters now stand, in the absence of trained counselors, the schools seem dependent almost entirely on evidence supplied by teachers and home visitors.

¹ Austin H. Turney, *op. cit.*

CO-ORDINATOR, NOT SUPERVISOR

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Within the past few years there has been a marked tendency to develop the field of supervision in the high schools, junior colleges, teachers' colleges, and even in the liberal-arts colleges. Although this movement is laudable and, if properly conducted, may yield high returns in better teaching at the levels at which teaching is reputed to be "notoriously poor," the technique and the general spirit of this supervision have, up to the present, been too closely identified with the type practiced in the elementary schools. The long experience in elementary-school supervision and the high degree of success attained have produced a field of endeavor which has its own attitudes, vocabulary, psychology, rules, and techniques. These are often extended *in toto* to the high-school and the college levels.

This extension fails to recognize the essential differences in teaching personnel, curriculum, educational objectives, student attitudes, and subject-matter fields at the various educational levels. For example, the high-school teacher *tends*, in this day of sharp competition and high academic and professional requirements, to be not only somewhat of an expert in his subject but also a person who has considered the educational implications of his department. He is, as a specialist, keen and eager, not only to advance in his own field, but also to prove the social usefulness and importance of his chosen subject matter. He has considered closely the best methods of presenting his materials and feels himself quite competent in the special method of his study. He has the zeal of a missionary and is usually an intelligent propagandist. To him teaching is an art, challenging the teacher to produce results by capitalizing on the sum total of his peculiar and unique abilities and special aptitudes. He feels that he has long ago passed the stage of standardized mediocrity.

Such teachers are not rare in the high schools, junior colleges, teachers' colleges, and liberal-arts colleges. They resent the assump-

tion that they know nothing about the science of education. They believe not only that they know their subject matter but that they know what it is good for in society, what relation it has to general education, and what are the problems involved in presenting it. At least, they know so much about these important matters that general supervision which attempts to offer pointed advice is far from welcome. In short, they believe that the supervision which now exists is worse than useless, save for beginners. If a high-school or a college teacher is not well enough trained to do his job without supervision of this elementary type, he is entirely unfit to instruct students who are beginning to think adult thoughts.

The connotations of the word "supervision" are such that a wise administrative officer hastens to apologize and explain when the word is mentioned to an able high-school or college faculty. There is so much "super" and so little "vision" in the general practice that a new word is imperatively needed to denote the service which should be rendered. The assumption which is exasperatingly apparent whenever educators talk of supervision is that the supervisor knows exactly how teaching should be done and can infallibly and scientifically recognize good teaching when he sees it. The standards of successful teaching are assumed to be obviously determined and agreed upon. When supervisors meet, this condition is deferentially *assumed*. The hypocrisy is evident, and the self-deception is laughable. The attitude is: "There is a body of highly technical information (well known to the trained supervisor) which we can apply but which is so fundamental and basic that there is no use discussing it. Let us merely discuss some phases of its application." Now, every one of these men knows that a real body of definite, scientific, basic principles which alone would warrant the usual writing or discussion on the subject of supervision simply does not exist.

Do not conclude that the well-prepared classroom teacher is a stubborn, non-co-operative individual. Far from it! He realizes that there are problems of administration which must be handled by practical men with far more executive ability than he possesses. He realizes that there are experts in psychology, vocational guidance, and curriculum construction. Moreover, he welcomes, even longs for, sympathetic and intelligent help in co-ordinating his work with that

of all the other teachers and departments. He is willing and anxious to have a clearing-house for the working-out of a complete and well-balanced pattern of education, which will be, as nearly as possible, abreast of the shifting scene of modern life. He glows with delight at the opportunity to pour into a sympathetic ear his carefully developed plans and techniques of instruction. He needs to keep in close and vital touch with the larger aims and policies of the institution in which he works. He is ever grateful for agencies which, in place of putting him on the defensive and maneuvering him into a narrow corner, will broaden and enrich his participation in school and community life.

These things should be the concern of every high-school and college administrator. However, let us not speak of "supervision," the relation of a superior to an inferior; let us talk of "co-ordination," the relation of equal and essential parts in an effective organism. This distinction is not, I believe, merely a matter of words but is a matter of basic slant toward the situation. It is a matter of reorientation in terms of the co-operative educational endeavor, in which, after all, the great burden must forever be on the individual classroom teacher.

SCHOOL STORES AND SELLING PRACTICES IN HIGH SCHOOLS IN ILLINOIS

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THE PROBLEM, THE PROCEDURE, AND THE SCHOOLS

The increase in high-school enrolment from a tenth¹ to nearer two-thirds² of the total population of secondary-school age in the last thirty-five years has brought with it many problems of properly serving the pupils. One of these problems is proposed for study in this investigation, namely, the practice of selling supplies in secondary schools. The term "selling" as applied in this study refers to sales to pupils through school stores, sales by school organizations and clubs, sales by the school but not in the school store, and sales by corporations or individuals who have obtained concessions granted by the school authorities. The specific purpose of this study was to determine (1) the services rendered to the pupil by the high-school store or selling agency and (2) the means used by the schools in providing these services to the pupil.

The data for this study were obtained by interviewing eighty-two high-school principals in Illinois. As a result of these interviews check lists of the practices in thirty-five schools were completed, twenty-nine of which had sufficient selling to give an adequate description of selling practices and to make their use in this study advisable.

The high schools studied are fairly well distributed over Illinois. Because large enrolments make school stores and selling more necessary, the schools studied are somewhat concentrated around the metropolitan areas of Chicago and St. Louis. However, typical schools located in the open country, in villages, and in cities are in-

¹ William John Cooper, in "Letter of Transmittal" to *Summary*, by Leonard V. Koos and Staff. National Survey of Secondary Education Monograph No. 1. United States Office of Education Bulletin No. 17, 1932.

² "A Mighty 'Issue' Laid to Rest," *School Review*, XLIII (April, 1935), 242.

cluded in the study. The schools are predominantly four-year township high schools, although no attempt was made to exclude other types of schools from the study. Twenty-one schools have township, seven community, and one the unit, type of organization. These schools were selected for the study because they have stores and practice selling. No attempt was made to study the problem in any particular type of high school. It cost some little effort to find a sufficient number of schools having school stores and an adequate amount of selling to make the study possible. The enrolments of the schools range from 97 to 7,510. The median enrolment of 1,110 indicates that the schools studied tend to be large schools.

SERVICES RENDERED

The items sold.—The articles sold to pupils by the stores of the twenty-nine schools studied are of three types: (1) general articles which are used in practically all kinds of school work, such as pencils, theme paper, textbooks, and ink; (2) special articles which are used in one course or in a few related courses of study, such as mechanical-drawing paper, stenographic notebooks, and art paper; (3) articles which are of no educational use, such as candy bars, pop, and chewing gum.

The total number of articles sold and the number of articles of each of the three types sold are shown in Table I. The greatest number of articles sold by any school is ninety-nine, and the smallest number is nine. The average number of articles sold by the twenty-nine schools is 39.6. On the average, more special articles than general articles are sold, the average of the special articles sold being 19.7 and the average number of the general articles 16.5. The average number of non-educational articles sold is relatively small (3.4).

Table II shows that the general articles most frequently offered for sale by the school stores are those which are used in practically all school courses, such as theme paper and lead pencils. Since theme paper is used in a great variety of courses—for example, English, history, the sciences, and even art—a large amount of it is required by pupils. A rather large number of the school stores carry in stock textbooks, notebooks, erasers, graph paper, secondhand books, compasses, workbooks, ink, notebook covers, and practice paper be-

cause these articles are generally used by pupils. Articles such as envelopes, fixative, and stamp pads, which are not so frequently used by pupils, are sold by only 10 per cent of the schools. The data show

TABLE I
NUMBER OF ARTICLES OF EACH OF THREE TYPES SOLD IN STORES
OPERATED BY TWENTY-NINE HIGH SCHOOLS IN ILLINOIS

School	Number of General Articles Sold	Number of Special Articles Sold	Number of Non-educational Articles Sold	Total Number of Articles Sold
1.....	32	42	5	79
2.....	23	29	5	57
3.....	38	59	2	99
4.....	24	15	0	39
5.....	18	18	3	39
6.....	10	18	3	31
7.....	13	34	0	47
8.....	16	10	4	30
9.....	31	51	5	87
10.....	30	37	5	72
11.....	16	9	2	27
12.....	7	14	0	21
13.....	11	6	4	21
14.....	12	14	2	28
15.....	24	15	3	42
16.....	8	8	7	23
17.....	19	13	6	38
18.....	13	19	4	36
19.....	7	8	0	15
20.....	8	11	0	19
21.....	15	17	6	38
22.....	16	9	7	32
23.....	8	2	5	15
24.....	5	4	0	9
25.....	22	30	2	54
26.....	20	24	4	48
27.....	15	16	6	37
28.....	4	21	2	27
29.....	13	19	7	39
Average..	16.5	19.7	3.4	39.6

that schools tend to stock their stores with articles which are demanded by the pupils and the articles demanded by pupils are those in general use in school work.

As shown in Table III, a number of special articles are rather generally sold by these school stores to meet the needs of pupils taking

art, commerce, and industrial-arts courses. Few special articles are offered for sale by a large percentage of the schools; only five of the ninety-eight special articles are offered for sale by as many as seven-tenths of the schools. Half of the special articles are offered for sale by as few as two schools. Although special articles are less frequently

TABLE II
GENERAL ARTICLES SOLD IN STORES OPERATED BY TWENTY-NINE
HIGH SCHOOLS IN ILLINOIS

Article	Number of Schools Selling Article	Article	Number of Schools Selling Article
1. Theme paper.....	26	22. Filing cards.....	9
2. Lead pencils.....	25	23. Paper clips.....	9
3. Textbooks.....	23	24. Binders.....	7
4. Notebooks.....	21	25. Paste.....	7
5. Erasers.....	20	26. Rings for binding.....	7
6. Graph paper.....	20	27. Filing boxes.....	6
7. Secondhand books.....	20	28. Fountain pens.....	6
8. Compasses.....	19	29. Locks.....	6
9. Workbooks.....	19	30. Supplementary readers.....	6
10. Ink.....	18	31. Bus tickets.....	3
11. Manila covers.....	18	32. Envelopes.....	3
12. Notebook covers.....	18	33. Fixative.....	3
13. Practice paper.....	18	34. Stamp pads.....	3
14. Pens.....	17	35. Envelopes for index cards.....	1
15. Rulers.....	17	36. Lead savers.....	1
16. Notebook fillers.....	15	37. Pencil clips.....	1
17. Dictionaries.....	14	38. Program tickets.....	1
18. Penholders.....	14	39. Receipt-books.....	1
19. Mechanical pencils.....	12	40. Soap.....	1
20. Pencil leads.....	12	41. Towels.....	1
21. Thumbtacks.....	12	42. Linen binders.....	1

purchased by pupils than those of the general type, school stores must carry in stock a large number of the special articles to meet the needs of the pupils in special courses. The number of special articles (ninety-eight) is more than double the number of general articles (forty-two) listed in Table II.

Table IV shows that twelve articles which are not used in school work are sold in the school stores. Ice-cream and candy bars are the articles of this type most frequently sold; more than half the stores sell these articles. Approximately 8 per cent of the total sales of school stores are articles of the non-educational type. Although

TABLE III
SPECIAL ARTICLES SOLD IN STORES OPERATED BY TWENTY-NINE
HIGH SCHOOLS IN ILLINOIS

Article	Number of Schools Selling Article	Article	Number of Schools Selling Article
1. Mechanical-drawing paper.....	24	50. Architect scales.....	2
2. Typewriting paper.....	24	51. Baseball shoes.....	2
3. Drawing pencils.....	23	52. Cello strings.....	2
4. Stenographic notebooks.....	23	53. Clarinet reeds.....	2
5. Protractors.....	20	54. Christmas cards.....	2
6. Lumber.....	16	55. Dissecting sets.....	2
7. Artgum.....	14	56. Mechanical-drawing sets.....	2
8. Art paper.....	14	57. Pasteboard boxes.....	2
9. Crayons.....	14	58. Rubber gloves.....	2
10. Drawing paper.....	14	59. Sand blocks.....	2
11. Paint brushes.....	14	60. Viola strings.....	2
12. Water colors.....	13	61. Violin strings.....	2
13. Shorthand pads.....	12	62. Agriculture-project books.....	1
14. Supporters.....	11	63. Baseballs.....	1
15. Colored pencils.....	9	64. Basketballs.....	1
16. Basketball shoes.....	7	65. Basketball tickets.....	1
17. Charcoal sticks.....	7	66. Basketball uniforms.....	1
18. Elastic bands.....	7	67. Biology drawing paper.....	1
19. French dictionaries.....	7	68. Buttons.....	1
20. Girls' gymnasium suits.....	7	69. Cap devices.....	1
21. Maps.....	7	70. Cardboard.....	1
22. Science handbooks.....	7	71. Chevrons.....	1
23. Short socks.....	7	72. Cleaver.....	1
24. Boys' gymnasium shoes.....	6	73. Colored paper.....	1
25. Music textbooks.....	6	74. Columnar pads.....	1
26. Slide rules.....	6	75. Composition books.....	1
27. Sweat shirts.....	6	76. Drawing ink.....	1
28. Triangles.....	6	77. Erasing shields.....	1
29. Boys' gymnasium suits.....	5	78. Eyelets.....	1
30. Charcoal paper.....	5	79. French curves.....	1
31. German dictionaries.....	5	80. Girls' gymnasium belts.....	1
32. Latin dictionaries.....	5	81. Insoles for shoes.....	1
33. Scissors.....	5	82. Journal paper.....	1
34. Water-paint pens.....	5	83. Knickers.....	1
35. Brass fasteners.....	4	84. Ledger paper.....	1
36. Football shoes.....	4	85. Lettering cards.....	1
37. Girls' gymnasium shoes.....	4	86. Lithographic crayons.....	1
38. Music-festival tickets.....	4	87. Mimeograph paper.....	1
39. Spanish dictionaries.....	4	88. NRA medals.....	1
40. Stockings.....	4	89. Oil colors.....	1
41. Sweaters.....	4	90. Pitch pipes.....	1
42. Track shoes.....	4	91. Polar co-ordinate paper.....	1
43. Woodshop collection.....	4	92. Polishing cloth.....	1
44. Adhesive tape.....	3	93. Spikes for track shoes.....	1
45. Dinner tickets.....	3	94. Tapelines.....	1
46. Index books.....	3	95. Thread.....	1
47. Mixers.....	3	96. Ties for uniforms.....	1
48. Tennis balls.....	3	97. Tripod magnifiers.....	1
49. Ammunition.....	2	98. Typewriter ribbons.....	1

the number of articles handled is small, it is doubtful whether the selling of these articles is of educational service to the pupil. Articles of a non-educational type are sold for profit by merchants in the community, and the merchants come to look on the publicly supported school store as an unfair competitor when it sells articles such as candy bars and chewing gum. It is also doubtful whether the high-school pupil's health and manners are benefited by selling him confections within the school building.

Textbook rental.—The textbook-rental system has been adopted by fewer than 40 per cent of the schools, and only 13.8 per cent of the

TABLE IV
NON-EDUCATIONAL ARTICLES SOLD IN STORES OPERATED
BY TWENTY-NINE HIGH SCHOOLS IN ILLINOIS

Article	Number of Schools Selling Article	Article	Number of Schools Selling Article
1. Candy bars.....	20	7. Popcorn.....	5
2. Ice-cream bars.....	16	8. Picture postcards.....	3
3. Peanuts.....	11	9. Shoestrings.....	2
4. Sandwiches.....	10	10. Atomizers.....	1
5. Pop.....	8	11. School stickers.....	1
6. Chewing gum.....	6	12. Shoe polish.....	1

schools rent all textbooks to pupils. However, the schools using the rental system report distinct advantages in the plan. Seventy-five per cent of the high-school principals gave "economy to pupils" as the primary advantage of the textbook-rental plan. Other reasons, given by less than 50 per cent of the principals, were: (1) "Books available when needed." (2) "Makes changes of textbooks less difficult." (3) "Textbooks not sold in community."

Four provisions have been made by schools for securing the capital with which to start the textbook-rental plan. (1) In approximately 75 per cent of the schools the board of education appropriates the money to buy the textbooks. (2) The textbook-rental plan is adopted and put into operation over a period of years, the original capital outlay being thus spread over several years. (3) The original capital outlay for textbooks is borrowed, and the debt is retired from the

rentals received on the books. (4) The schools make contracts with book companies to pay for the textbooks over a period of three or four years, a plan which makes possible the retirement of the debt from the rentals received on the textbooks. Only a small percentage of the schools use the last three plans to obtain the capital outlay for textbooks.

Schools renting all textbooks to pupils charge a rental rate each year equal to a portion of the original cost of the books, for example, 40 per cent the first year, 30 per cent the second year, and 20 per cent the third year. Schools renting part of the textbooks used by pupils, such as supplementary textbooks in literature and home-economics courses, charge an arbitrary amount, for example, fifty cents a pupil each semester. The rental rates are largely determined by the number of years a textbook is used. There is general agreement among the schools that the life of a rental textbook is four years.

MANAGEMENT AND OPERATION

Official in charge.—The data in Table V show that half the school stores are managed either by the principal or by the office clerk. All these schools have enrolments of less than a thousand. The average enrolment of the seven schools which use clerks for store managers is approximately double that of the schools in which the principals serve as store managers. As the enrolment of the school increases, there is a tendency to free the principal from the management of the school store and to delegate these duties to a person on the staff who is capable of assuming the responsibilities.

Quarters provided.—In 83 per cent of the schools the stores are considered of enough importance to be housed in separate rooms provided with racks, shelves, and cases for storing and displaying goods. In 14 per cent of the schools supplies are offered for sale in the school office. The stock of goods in these schools is small, and that there is a lack of room is evidenced by the fact that the goods are sandwiched between typewriters, adding machines, and filing cases. Only a few schools, 28 per cent, have located the store on the first floor where it is easily accessible to the pupils. The tendency is to house the store in a room of a semi-basement type, more suitable for stor-

age purposes than for a store; 59 per cent of the schools house the store in a semi-basement room. Although the schools have realized the necessity of a separate room for the school store, they have not considered it necessary to make the store readily accessible to the pupils.

Workers in the store.—In 69 per cent of the schools the work of the school store is done by pupils who are paid for their services. In 14 per cent of the schools pupils work in the stores but are not paid for

TABLE V
OFFICIALS IN CHARGE OF STORES OPERATED BY TWENTY-
NINE HIGH SCHOOLS IN ILLINOIS

School Official in Charge	Average Enrolment of School	Number of Schools
Principal.....	449	8
Clerk.....	983	7
Teacher.....	1,717	5
Business manager.....	4,990	3
Librarian.....	1,175	2
Assistant principal.....	774	2
Secretary of board of education.....	264	1
Board of education.....	1,110	1
Total.....		29

their services. In the larger schools one or more clerks are hired to help in the store. In all schools the time of the teachers is considered too valuable to be used in selling articles over a counter.

Hours of business.—The schools follow two general time schedules for keeping the store open. Twenty-six schools open the store in the morning before the school session, at noon, and after school. It is thought that these hours give the pupils adequate time to purchase school supplies. Two of the schools open the store before school starts in the morning and close it only at the end of the day. The second time schedule, of course, gives pupils opportunity to purchase supplies at any time during the day, but the practice of opening the store in the morning, at noon, and after school reduces the

cost of operation, makes possible the use of pupil help, and yet gives adequate time for pupils to purchase supplies.

Finances.—Although thirteen of the schools reported a small profit on the operation of their stores for the year 1933-34, school stores are not usually operated for profit. The general practice is to sell goods at cost; if a small profit or loss results, it is listed in the books as "over" and "short." Goods are marked at a price which pays the original cost and the overhead necessary to dispense them. Eighty-three per cent of the schools do not pay the sales tax. The six schools which pay the sales tax include that amount in the price of the article and pay the tax on the gross sale.

Three plans have been used by schools to provide the capital outlay for their stores. (1) Capital is provided by the small profit which accumulates from the operation of the store. (2) Boards of education have appropriated money for the original capital outlay. (3) The school acts as the buying agent of the pupils and, by staggering the payments for goods to the wholesaler or jobber, pays the bills from the income of the store.

REASONS FOR MAINTAINING STORES

The reasons given by the principals of the schools studied for maintaining the stores are evidence that the school store is providing a distinct educational service to the pupils. The principals of all the high schools studied gave "convenience to pupils" as the primary reason for maintaining school stores. Stores in schools are more convenient for pupils than are the local stores because city schools are not near the business center and pupils in country and village schools are unable to obtain supplies from any source in their community. The principals of twenty-eight of the schools stated that school stores are maintained to provide "economy to pupils." The saving to pupils is effected by the difference between the list price of the local store and the cost price of the school store, the saving being approximately 20 per cent. "Standardization of supplies," resulting in greater classroom efficiency, was given by 55 per cent of the principals as the reason for maintaining school stores. These principals consider standardization impossible when the supplies are furnished by the

local merchants because these merchants, in order to increase their profits, offer substitutes for the standardized materials. "To drive the satellite store owner out of business" was the reason given by one principal for establishing a school store. A privately owned and operated store which is located near the school and which sells confections, lunches, and school supplies to high-school pupils is often called a "satellite store." This type of store is well known to high-school principals as a source of serious problems in pupil administration. By establishing a school store, a school can sell articles needed by the pupils at a lower price and of a better quality than the satellite store proprietor can offer. Consequently, the latter is forced out of business through his inability to compete with the school store.

SELECTED REFERENCES ON SECONDARY-SCHOOL INSTRUCTION

III. THE SUBJECT FIELDS—CONTINUED

LEONARD V. KOOS AND COLLABORATORS

This third and final list of selected references on secondary-school instruction to appear in the current volume of the *School Review* contains items dealing with the subject fields not represented in the list published in the February issue, namely, industrial and vocational arts, agriculture, home economics, business education, music, art, and physical education. The present list, like the first and the second, follows a definition of "instruction" which includes its three main aspects of (1) curriculum, (2) methods of teaching and study and measurement, and (3) supervision.

INDUSTRIAL AND VOCATIONAL ARTS¹

HOMER J. SMITH
University of Minnesota

186. *American Standard for Drawings and Drafting Room Practice*. New York: Society for the Promotion of Engineering Education and American Society of Mechanical Engineers (29 West Thirty-ninth Street), 1935. Pp. 24.

This bulletin, approved by the American Standards Association, should be in the hands of teachers and students of drawing, as well as professional draftsmen and tradesmen generally. It covers arrangement of views, line work, dimensioning, sheet sizes, lettering, etc., in an attempt to further standardization.

187. BAUDER, CHARLES FRANKLIN. "Vocational Education and the New Deal," *Industrial Education Magazine*, XXXVII (May, 1935), 135-36.

A brief and specific report of four addresses given at the February, 1935, meeting of the National Education Association. The article affords understanding of the relation of vocational education to federal government activities popularly designated as CCC, TVA, AAA, and apprentice training.

188. CHRISTENSEN, ERNEST H. "Industrial Arts in Certain Junior Colleges," *Industrial Education Magazine*, XXXVII (January, 1935), 11-13.

¹ See also Item 485 in the list of selected references appearing in the October, 1935, number of the *School Review*.

A brief yet fundamental report concerning the present industrial-arts offerings in seventy junior colleges, chiefly public, located in twenty-three states. Restricted to the presence or absence of industrial courses, the frequency of offering of the subjects located, and the number of semester hours of credit offered in each subject. Readers will be stimulated to further study of professional problems here suggested.

189. COVELLE, LLOYD KEITH. "Needed Investigations and Research in Industrial Education," *Industrial Education Magazine*, XXXVII (September, 1935), 202-4.

A brief and suggestive statement. Vital problems are indicated for intensive study, those of the general industrial school and of state supervision being given emphasis.

190. FRIESE, JOHN FRANK. "Achieving a Major Aim of Modern Education through Correlation," *Industrial Education Magazine*, XXXVII (September, 1935), 178-80.

A brief and timely review of the problem of correlation, or integration, in the industrial-arts field. Suggestions are made concerning fusion of content within courses, between courses, and among departments.

191. LINDEMAN, CARL V. "Aids for the School Shop," *Industrial Arts and Vocational Education*, XXIII (October, November, and December, 1934), 312-13, 351-52, 381-82.

A long list of references to the sources of supplementary material for industrial-arts and trade-training classes.

192. MAYS, ARTHUR B. (Special Editor). "Vocational Education Number," *Education*, LV (April, 1935), 449-512.

Fifteen articles by well-known industrial educators present the need for vocational education, its contribution to social and economic adjustment, its current methods, and its service to unemployed youth.

193. NEWKIRK, LOUIS V., and GREENE, HARRY A. *Tests and Measurements in Industrial Education*. New York: John Wiley & Sons, Inc., 1935. Pp. x+254.

The authors have co-operated to provide a college textbook and a valuable handbook of reference for teachers and administrators in industrial education. The following items are indicative of the matters treated, all in direct relation to shop and drawing subjects in the schools: types of tests, selection, evaluation, use of tests in classroom and shop, construction of informal tests and scales, aptitude and achievement tests, interpretation of test results.

194. RAKESTRAW, C. E. "Training for Diversified Occupations," *American Vocational Association Journal and News Bulletin*, X (September, 1935), 55-57.

On the basis of promotional and supervisory experience in a number of southern states, Rakestraw offers a helpful statement for those concerned with vocational-training problems outside the urban centers. Emphasis is given to such

practical considerations as selection of trainees, advisory committees, types and lengths of courses, and operating expense. Such training is assumed to be a co-operative matter between the schools and the industries concerned.

195. SMITH, LESTER C., and WITTICK, E. C. "Courses in Practical Arts in the University High School," *Industrial Education Magazine*, XXXVI (January, 1934), 11-19.

Two well-known professional workers in the University High School of the University of Chicago present the philosophy, offering, and practice of practical-arts work in their institution. The shops are described, the floor plans and placements are shown, and the content of the courses is definitely explained. Those who think of high-school shops as laboratories and who stress the informational phases of the work will appreciate this exposition.

196. TIBBITTS, F. LYMAN. "Functions of Co-ordination," *Industrial Arts and Vocational Education*, XXIV (July, September, and October, 1935), 199-201, 252-55, 288-90.

This series of three articles, containing eight tables, is a comprehensive report of a study of the work of co-ordinators in general continuation schools. Among the main topics considered are publicity, home visitation, placement service, curriculum services, and relations with other teachers.

197. UNITED STATES OFFICE OF EDUCATION, VOCATIONAL DIVISION. *A Manual for Instructors in Civilian Conservation Corps Camps and Outlines of Instruction for Educational Advisers and Instructors in Civilian Conservation Corps Camps*. Washington: Government Printing Office, 1935.

There are in this series the general manual of ninety-six pages and fifteen bulletins, averaging seventy pages, on specific occupations, such as agriculture, carpentry, automobile repairing, and photography.

198. WALTERS, J. E. "Industrial Training and the Crisis," *Trained Men*, XV (Spring, 1935), 78-79, 92.

A report concerning the training programs of 215 companies which employ a total of approximately a half-million workers. Information is given on fields of work, courses, activities, etc., with comparison between the years 1929 and 1934.

199. WARNER, M. E. "Industrial-Arts Projects," *Industrial Arts and Vocational Education*, XXIV (March, 1935), 69-71.

A detailed table shows reactions of 140 high-school instructors and 63 college instructors of industrial arts to certain questions of method and management in connection with shop projects.

200. WARNER, WILLIAM E. "Industrial-Arts Research," *Industrial Arts and Vocational Education*, XXIV (February, 1935), 38-46.

The author sets forth the need and possibilities of research in a special phase of education. He reports studies by associations and individuals to illustrate types and techniques of work and supplies a selected bibliography of ninety-four items.

201. YAGER, SYLVAN A. "Selecting General-Shop Courses," *Industrial Arts and Vocational Education*, XXIV (December, 1935), 359-60.

"An analysis of the factors which must be considered when selecting the things to be taught in the general shop." Twenty-one factors are listed, such as money available, equipment, teacher qualifications, and evaluation of boys' interests.

AGRICULTURE

SHERMAN DICKINSON

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A most noticeable shift in the emphasis in the literature of agricultural education is in the direction of problems in "continuing education."

202. ANDERSON, C. S. "Predicting Teacher Success in Agriculture," *Agricultural Education*, VIII (August, 1935), 28-29, 31.

A brief statement of findings in a study of three hundred rural-education graduates of the Pennsylvania State College. Eight definite criteria of success are suggested.

203. BRUNNER, EDMUND DES. "Recent Rural Social Trends," *Agricultural Education*, VII (March, 1935), 131-33.

Analyzes the rural social situation and indicates the most important tendencies.

204. CLEMENTS, D. M. "The Problem of Out-of-School Farm Youth," *Agricultural Education*, VII (February, 1935), 125, 128.

Argues for the responsibility of the school in the further education of young men and women.

205. DEYOE, G. P. "Pencil and Paper Tests for Measuring Achievement in Vocational Agriculture," *Agricultural Education*, VIII (December, 1935), 90-91, 96.

A critical analysis of objective-testing procedures, with special reference to correlations between "information" and "problem-solving" tests.

206. GETMAN, ARTHUR K. "The Teacher and Social Change," *Agricultural Education*, VIII (July, 1935), 3-5.

Outlines four major responsibilities of the teacher in these days of "social experimentation."

207. GETMAN, ARTHUR K. "The Measure of a Teacher," *Agricultural Education*, VIII (October, 1935), 51-52.

A brief philosophical discussion of desirable qualities in teachers.

208. HAMMONDS, CARSIE. "Promoting Rural Progress," *Agricultural Education*, VII (December, 1934), 83-84.

Presents four "nests" of problems to be faced in rural progress and suggests manner of attack.

209. LINKE, J. A. "A National Program for Vocational Education in Agriculture," *Agricultural Education*, VII (June, 1935), 179-80, 182.
Suggests needed emphases in agricultural education and the functions of various groups concerned.
210. MAGILL, EDMUND C. "Progress in Experimentation on Out-of-School Youth in Virginia," *Agricultural Education*, VIII (August, 1935), 26-27, 29.
A report on a trial program of training for out-of-school youth in six rural counties in Virginia. Discusses objectives, surveys, methods, and conclusions.
211. MANNY, T. B. "Characteristics and Needs of Rural Youth in the 16-24 Year Age Group," *Agricultural Education*, VII (February, 1935), 121-24.
Discusses the basic problems in this field, points out changes in the character of the group, and suggests methods of meeting the situation.
212. NEWMAN, WALTER S. "Agricultural Education in the New Deal," *American Vocational Association Journal and News Bulletin*, X (September, 1935), 62-67.
A statement of the ways in which the program of vocational agriculture may best function in rural readjustment.
213. NOLAN, A. W. "A Study of Rural Education in Illinois with Special Reference to Vocational Agricultural Education for the Fifteen-Year Period 1917 to 1933," *Agricultural Education*, VII (January, 1935), 99-100.
Suggestions for the modification of the agricultural-education program, based on the doctoral thesis of Carl Colvin (University of Illinois, 1934).
214. ROWLEY, ELMER W. "The Home-Project Plan at Its Best," *School Review*, XLIII (April, 1935), 243-46.
An inspiring narration of a home project with poultry.
215. SCHMIDT, G. A. "Supervised Practice and Classroom Instruction in Vocational Agriculture," *Agricultural Education*, VII (December, 1934), 86-87.
Describes the co-operative relation necessary between school and home and presents the need for class, group, and individual methods of instruction.
216. STARRAK, J. A. "A Survey of Out-of-School Youth," *Agricultural Education*, VII (May, 1935), 170-71, 173.
Presents the summarized findings of a survey of 1,597 farm youths in 13 Iowa communities. Includes conclusions and significant observations of field workers.
217. STEWART, R. M. "Adjusting the Training Program for Teachers of Rural Youth," *Agricultural Education*, VII (May, 1935), 163-64; VIII (August and November, 1935), 21, 67-68.

The three articles present the needs (1) for a new determination of the types of services that rural youth need, (2) for a more satisfactory means of selecting trainees and determining a standard of training performance, and (3) for a new evaluation of professional and technical training programs in teacher-training institutions.

218. *Summaries of Studies in Agricultural Education*. United States Office of Education, Vocational Education Bulletin No. 180, Agricultural Series No. 47 (1935). Pp. 196.

An annotated bibliography of 373 studies in agricultural education, with a classified subject index and a general evaluation.

HOME ECONOMICS²

CLARA M. BROWN

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219. BRECK, MARION F. "Cooking for Fun," *Journal of Home Economics*, XXVII (November, 1935), 576-78.

Discusses units planned especially for girls from low-income levels. The objectives are to raise food standards and to change food preparation from a monotonous duty to creative work giving pleasure to the cook and to others.

220. BROWN, CLARA M. "Home Economics," *Psychology and Methods in the High School and College*, pp. 510-12, 545. Review of Educational Research, Vol. IV, No. 5. Washington: American Educational Research Association of the National Education Association, 1934.

Summarizes research done during 1931-33 on methods of instruction.

221. BURKE, ELEANOR; CONAWAY, MABEL; and ELTERS, VIOLA. "An Adventure in Teaching," *Practical Home Economics*, XIII (January, 1935), 3-5, 28.

Faced with problems of overcrowded laboratories, the authors divided junior high school classes into groups of girls who worked rather independently on different assignments. Resourcefulness and ability to manage work seemed greater, but more time was wasted and less knowledge was gained than under usual conditions.

222. CHADDERDON, HESTER. "Measurement in Home Economics Education," "Planning a Measurement Program," and "Evaluation of Evidence in Measurement," *Practical Home Economics*, XIII (October, 1935), 289, 308-9; (November, 1935), 322, 341-42; (December, 1935), 363, 374-75.

A series of articles discussing a program of measurement intended to emphasize pupil growth rather than merely to provide a basis for marks.

223. COLES, JESSIE V., and AGNEW, HUGH E. "Advertising and the Consumer-Buyer," *Practical Home Economics*, XIII (January, 1935), 8-9, 24-26.

² See also Items 582, 583, and 587 in the list of selected references appearing in the November, 1935, number of the *Elementary School Journal*.

The conflicting viewpoints of consumer and advertiser presented side by side offer to the alert high-school teacher many valuable suggestions for discussion of advertising claims.

224. DAVIES, J. EARL. "America Plans for Better Homes," *Journal of the National Education Association*, XXIV (December, 1935), 285-300.
Describes vividly the inadequate housing facilities of this country. Explains the factors that make for exorbitant housing costs and suggests ways in which costs can be reduced through regional planning, modernization of building industry, and a national educational program.
225. DUFF, HELEN INMAN. "The School Lunch Survey in Massachusetts," *Journal of Home Economics*, XXVII (November, 1935), 556-59.
Describes a co-operative survey involving many agencies in the state. Cites and discusses the findings and the specific improvements resulting from the survey. Bulletins and other material on school lunches are available from the Massachusetts Department of Public Health.
226. HALLER, ELLA. "How Can Home Economics Reach the Sub-Standard Girl?" *Practical Home Economics*, XIII (February, 1935), 39, 55.
A plea for home-economics content and methods of instruction adapted to problems of the families which are on the bare subsistence level or are on relief—a group representing half of the population.
227. HERRINGTON, EVELYN M. *A Guide-Book for Homemaking*. New York: D. Appleton-Century Co., Inc., 1935. Pp. 330.
A loose-leaf textbook for pupil use, including goals, guide sheets, progress charts, and detailed lists of duties for different jobs. Interestingly illustrated.
228. HILTY, W. J. "Lunch-Room Management in the County School," *Journal of Home Economics*, XXVII (April, 1935), 211-14.
An excellent discussion of lunchroom problems, with concrete suggestions regarding administration, accounting, food standards and menus, personnel, equipment, purchasing, and free feeding.
229. ROBERTS, LYDIA J. *Nutrition Work with Children*. Chicago: University of Chicago Press, 1935 (revised). Pp. xx+640.
This expanded and largely rewritten edition represents a source book for all those interested in nutrition problems. Based on actual experience with children, it is valuable in its emphasis on effective ways of improving the health of children through school instruction, the school lunch, and co-operation with the home. An excellent bibliography is included.
230. ROCKWOOD, LEMO DENNIS. *Teaching Family Relationships in the High School—A Manual for Teachers*. Washington: American Home Economics Association (620 Mills Building), 1935. Pp. xii+118.
Discusses the need for instruction in family relationships and how it can best be given. Offers suggestions regarding the use of the author's books *Living Together in the Family*, published in 1934 (Item 195 in the list of selected refer-

- ences in the March, 1935, number of the *School Review*), and *Pictures of Family Life* (see following item). The twenty-five-page bibliography should be invaluable to all those who are attempting to teach such material.
231. ROCKWOOD, LEMO DENNIS, and STEELE, M. H. *Pictures of Family Life*. Washington: American Home Economics Association (620 Mills Building), 1935. Pp. x+304.
Contains detailed descriptions of thirty-four actual families. Is especially valuable in making possible an objective approach to the problems of family relationships.
232. SPAFFORD, IVOL. *Fundamentals in Teaching Home Economics*. New York: John Wiley & Sons, Inc., 1935. Pp. xiv+424.
Sets forth the philosophy of home economics and the contribution which home-making instruction should be able to make in an integrated program of education. Useful as a reference for teachers, prospective teachers, and administrators.
233. WINCHELL, FLORENCE E., and OTHERS. "Directed Observation of Children for Classes in Child Development," *Journal of Home Economics*, XXVII (June, 1935), 355-58.
A symposium containing excellent suggestions regarding means by which high-school pupils may be given valuable experience through contacts with younger children.
234. WOOD, MILDRED WEIGLEY, and OTHERS. "Teaching Money Management," *Journal of Home Economics*, XXVII (January, 1935), 17-25.
An excellent symposium which makes clear the need for discussing money management in terms of the girls' own experiences rather than from the family angle. Offers many suggestions as to how the subject can be made vitally interesting.

BUSINESS EDUCATION

FREDERICK J. WEERSING

University of Southern California

235. "Advanced General Business Education," *National Business Education Quarterly*, III (May, 1935), 1-42.
Presents a rather mechanical treatment of general business education in the senior high school and the junior college, supplemented by a brief bibliography of titles dealing mostly with current economic problems.
236. "Changing Conceptions of Bookkeeping," *National Business Education Quarterly*, III (December, 1934), 1-42.
Contains seven articles on a number of aspects of the teaching of bookkeeping.
237. DAVIS, DWIGHT D. W. "An Evaluation of the Simplified Typewriter Keyboard," *Journal of Business Education*, X (May, 1935), 11-12; X (June, 1935), 10, 29; XI (September, 1935), 21-22, 38; XI (October, 1935), 19-21.

An extensive and objective comparison of learning rates, errors, etc., on standard and simplified keyboards.

238. *Developing the Individual through Training for Business*. Fifth Yearbook of the Commercial Education Association of New York City and Vicinity. New York: Commercial Education Association of New York City and Vicinity (Max J. Schottland, President, % George Washington High School), 1935. Pp. 242.
Contains papers on general problems and on several subject-matter fields in business education as presented at the semiannual meetings for 1934-35.
239. ERIKSEN, EDWARD G. "Necessity for Change in Commercial Education," *Journal of Business Education*, X (May, 1935), 7-8, 16; X (June, 1935), 21-22, 30.
Presents a broad view of the fundamental needs for the improvement of instruction in business.
240. GROPP, REGINA. "A Guide to the Current Literature in Business Education," *Journal of Business Education*, X (June, 1935), 19-20.
A convenient list of all the more common sources of information about business education that will be of real help to investigators in this field.
241. HAAS, K. B. "An Outline for a Course in the Principles of Consumer Economics," *Journal of Business Education*, X (March, 1935), 25-26; X (April, 1935), 24; X (May, 1935), 19, 28.
Presents one of the most realistically suggestive and forward-looking courses in consumer education that have yet been published. Lists twenty-seven main topics with subdivisions and references under each, all highly suitable for use in high schools, junior colleges, or evening classes.
242. HAYNES, BENJAMIN R. "College-trained Secretaries," *Business Education World*, XVI (September, 1935), 17-19, 84.
A well-documented article on the scope, nature, and need of college-trained secretaries.
243. HAYNES, BENJAMIN R., and JACKSON, HARRY P. *A History of Business Education in the United States*. Cincinnati, Ohio: South-Western Publishing Co., 1935. Pp. 160.
A brief, condensed treatment based on general, derived sources and organized by types of institutions and periods.
244. JENKINS, LAWRENCE A. "Shorthand by Word Frequency," *Business Education World*, XV (April, 1935), 621-22.
Describes a controlled experiment that seems to show an advantage for a basic-vocabulary approach.
245. LOMAX, PAUL S., REYNOLDS, HELEN, and ELY, MARGARET. *Problems of Teaching Typewriting*. New York: Prentice-Hall, Inc., 1935. Pp. 282.

A comprehensive treatment including brief discussions of the psychology of the knowledges, skills, and attitudes considered appropriate to the field, followed by many concrete suggestions for equipment, classroom management, and measurement of achievement.

246. LOSO, F. W. "Trends in Office Practice," *Journal of Business Education*, X (May, 1935), 13-14; XI (October, 1935), 12, 24; XI (November, 1935), 21-22.

Based on a state-wide survey of instruction in office practice in New Jersey. Shows trends in matters of curriculum organization, aims, course content, distribution of time to various topics, provision for practical experience, and room equipment.

247. *National Business Education Outlook*. First Yearbook of the National Commercial Teachers' Federation. Wilmington, Delaware: National Commercial Teachers' Federation (Jay W. Miller, Treasurer, % Goldey College), 1935. Pp. 286.

Presents papers by forty outstanding leaders in business education classified under five headings: (1) general principles, (2) the curriculum, (3) the consumer, (4) pupil personnel and guidance, and (5) materials and methods in some of the major subjects.

248. *Practices and Problems in Commercial Teacher Training Institutions*. National Association of Commercial Teacher Training Institutions Bulletin, Nos. 6 and 7 (February and May, 1935), pp. 28 and 24. Muncie, Indiana: Vernal H. Carmichael, Secretary (Ball State Teachers College). Bulletin Number 6 presents results of a country-wide survey of teacher-training practices in this field. Bulletin Number 7 contains articles on "key questions" relating to this problem.

249. *Problems of the Business Teacher*. Eighth Yearbook of the Eastern Commercial Teachers' Association. Philadelphia: Eastern Commercial Teachers' Association (1200 Walnut Street), 1935. Pp. xxvi+452.

This yearbook is devoted to discussions of (1) general problems of business teachers, (2) classroom problems in the teaching of all the major business subjects, and (3) the special problems of business education in junior and senior high schools, evening schools, and teacher-training institutions. Presents a good picture of business education as its practitioners see it today.

250. *Retailing and Marketing Occupations in the Secondary School*. Proceedings of Conference on Training for Retailing and Marketing Occupations in the Secondary School Sponsored by New York University. Cincinnati, Ohio: South-Western Publishing Co. Pp. 56.

Presents papers by store executives and leaders in business education on the trends in marketing opportunities in various types of stores and on the methods of training in marketing and merchandising. Includes an extended bibliography, compiled by Herbert A. Tonne, on the teaching of merchandising.

251. "Trends in the Teaching of Everyday Business," *National Business Education Quarterly*, IV (October, 1935), 1-44.
Presents a comprehensive, though largely subjective, view of non-vocational junior business training.
252. "Trends in the Teaching of Office Practice," *National Business Education Quarterly*, III (March, 1935), 1-48.
Devoted to a detailed exposition of aims and practical procedures for teaching this subject. Gives a selected bibliography of seventy-three titles.
253. WHITE, BRUCE. "Typewriting as a Factor in College Success," *School Review*, XLIII (May, 1935), 374-78.
A study of the effect of typewritten work on students' marks and on scholarship, independent of influence on instructor.
254. *Yearbook of Business Education, 1934-1935*. Cincinnati, Ohio: South-Western Publishing Co., 1935. Pp. 242.
A reprint of the more important articles appearing in the *Balance Sheet* during the year 1934-35, classified into sixteen chapters dealing with the major phases and subjects of business education.

MUSIC*

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255. BARTHOLOMEW, WILMER T. "Imagery in Voice Pedagogy," *Peabody Bulletin*, (December, 1934), pp. 20-29. Baltimore: Peabody Conservatory of Music.
Report of an investigation of vocal quality and an explanation of why certain terminology of an imaginative nature is useful in teaching singing.
256. CORNWALL, J. SPENCER. "Homogeneous Grouping of Pupils for Music Classes," *Music Educators Journal*, XXII (September, 1935), 35, 37.
Describes methods used and courses offered in both elementary and secondary schools of Salt Lake City to classify and care for pupils segregated according to musical ability.
257. DEAMER, ARTHUR. "A Study of Public School Music Practices," *Music Educators Journal*, XXII (October, 1935), 13-14.
Report of findings of a questionnaire sent to superintendents of schools in a selected group of cities in the territory of the North Central Association of Colleges and Secondary Schools to ascertain current practices in music-teaching in high schools.
258. FREMMER, MABEL F. "Extra-curricular Activities in Music," *Education*, LVI (October, 1935), 97-100.

* See also Items 546 and 551 in the list of selected references appearing in the November, 1935, number of the *Elementary School Journal*.

Lists types of musical organizations suitable for curriculum-extension courses and objectives for each activity.

259. GEHRKENS, KARL W. "The General Music Course in Junior High School," *Music Educators Journal*, XXII (November-December, 1935), 18-19, 70-71.

Points out defects often found in the general music course and suggests ways of planning and teaching that will interest boys and girls of junior high school age in music.

260. GOLDMAN, EDWIN FRANKO. *Band Betterment*. New York: Carl Fischer, Inc., 1934. Pp. x+194.

The subtitle, "Suggestions and Advice to Bands, Bandmasters, and Band Players," is descriptive of the contents. Among problems dealt with in the forty-two chapters are the following: choice of instrument, when to begin study, rehearsals, programs, seating arrangement, intonation, phrasing, suitable solos and how to play them, and massed bands. The treatment is brief but satisfactory.

261. LA PRADE, ERNEST. "Technique of Broadcasting Instrumental Groups," *Music Educators Journal*, XXII (September, 1935), 25-28.

Explains difficulties of broadcasting ensemble numbers and gives practical suggestions on how instruments should be grouped to obtain best results.

262. MIDDLESEX EDUCATION COMMITTEE. *Music in Schools*. New York: Oxford University Press, 1935. Pp. vi+170.

A syllabus of music-teaching for English schools covering work for children from five to fifteen years of age. Methods of teaching and lists of materials for different music classes are given in the Appendixes and should be of interest and value to American teachers.

263. PITTS, LILLA BELLE. *Music Integration in the Junior High School*. Boston: C. C. Birchard & Co., 1935. Pp. xiv+206.

Gives plans for the general music course for the three grades in junior high school. The author discusses aims of the course, time allotment, conditions and procedure, activities, and equipment. Lists materials that link music with other school subjects.

264. STANTON, HAZEL MARTHA. *Measurement of Musical Talent*. University of Iowa Studies in the Psychology of Music, Vol. II. Iowa City, Iowa: University of Iowa, 1935. Pp. 140.

A review and an explanation of the experiment in testing students for musical talent conducted at the Eastman School of Music under the direction of the author. The methods used and the results obtained serve as a guide to the use of the Seashore Measures of Musical Talent.

265. THOMPSON, MAURINE. "Class Vocal Teaching," *Music Educators Journal*, XXII (October, 1935), 18-20.

A brief description of an experiment in teaching voice in classes.

ART

W. G. WHITFORD

266. *American Art Annual*, Vol. XXXI for the Year 1934. Washington: American Federation of Arts, 1935. Pp. xii+528.
A reference volume chronicling events in the field of art for the United States during the year 1934. It lists, among other valuable data, "The Year in Art," "Art Schools," "The American Federation of Arts," "National and Regional Organizations," "American Organizations Abroad," "Art Magazines," "Newspapers Carrying Art Notes," "Directory of Art Organizations," and "Index with Cross-References."
267. BIRREN, FABER. *Color Dimensions*. Chicago: Crimson Press, 1934. Pp. 58.
A book produced by a professional colorist. Presents a discussion of the psychology of color and a history of color systems. A color equation and a color circle are introduced as a basis for the color theory of the book.
268. BRITTON, MARGARET. *A Parallel Chronology of Painters*. Chicago: Harold H. Laskey (520 North Michigan Avenue), 1935.
Comprises a parallel chronology chart of painters from 1250 to 1800 on an eighteen-fold sheet twenty-four by twenty-eight inches in size. The reverse side gives an index of nineteenth-century painters with maps of Europe and a bibliography. A valuable guide for high-school and college teachers of the history of art.
269. BUSWELL, GUY THOMAS. *How People Look at Pictures*. Chicago: University of Chicago Press, 1935. Pp. xvi+198.
An investigation based on examinations of the eye-movements of two hundred individuals, both children and adults, when looking at pictures. By means of an ingenious apparatus both vertical and horizontal movements of the eyes were photographed. Thus, for the first time objective evidence is presented concerning centers of interest and the duration of attention in observing pictures. Fifty-five pictures were used as a basis for the study, including reproductions of paintings, sculpture, architecture, furniture, decoration, and applied design.
270. HALL, T. VICTOR. *First Steps in Pictorial Composition*. New York: Pitman Publishing Corp. Pp. 88.
A small but helpful book dealing with the basic principles of pictorial organization. Lays a foundation upon which the student or teacher may build his own individual expression. Presents well-planned projects in various modes of pictorial expression, such as charcoal, pen and ink, vignette, dry brush, oil, wash, colored ink, and water color.
271. IONIDES, BASIL. *Color in Everyday Rooms*. London: Country Life, Ltd., 1934. (New York: Charles Scribner's Sons.) Pp. 116.
A complete and helpful book dealing with the principles of color in all phases of home and interior decoration. A guide to successful furnishing and decorating of domestic and commercial rooms.

272. KNAUBER, ALMA JORDAN. *The Knauber Art Vocabulary Test: Examiners Manual*, pp. 6; *The Knauber Art Ability Test: Examiners Manual*, pp. 20. Cincinnati, Ohio: Alma Jordan Knauber (3331 Arrow Avenue), 1935.
- Manuals for use in scoring the vocabulary and ability tests in art devised by the author. Published through funds provided by the Carnegie Corporation of New York in co-operation with the American Federation of Art's Committee for Research in Art.
273. MEIER, NORMAN C. "Diagnosis in Art," *Educational Diagnosis*, pp. 463-76. Thirty-fourth Yearbook of the National Society for the Study of Education. Bloomington, Illinois: Public School Publishing Co., 1935.
- A general history and summary of the testing movement in the field of art education. The material is presented under four headings: "The Functions of Art Instruction," "The Relation of Artistic Capacity and Ability to Production and Appreciation," "Diagnostic Techniques," and "Learning Difficulties in Art." The section on "Diagnostic Techniques" is especially informing, as it supplies a brief review of existing scales, ability tests, and tests of artistic appreciation and gives information about the originators of measuring devices and the value of their contributions.
274. MUELLER, JUSTUS F. *A Manual of Drawing for Science Students*. New York: Farrar & Rinehart, Inc., 1935. Pp. xiv+122.
- A clear-cut presentation of the essentials of drawing for students preparing for scientific and engineering professions. A valuable contribution to an aspect of art at present receiving little encouragement in the schools.
275. MURPHY, VIRGINIA. *Puppetry—An Educational Adventure*. New York: Art Education Press, Inc., 1934. Pp. 24.
- Detailed instructions for making puppets, constructing a puppet stage, and making accessories for a marionette play. Consideration is given to selecting and directing the play.
276. PLAISTED, THAIS M. *An Integrated Course in Art Appreciation*. Los Angeles, California: Ray Marsh Fox (1169 North Virgil Avenue), 1935. Pp. 336.
- A complete history of art, in which all periods and types of art are treated comprehensively. Appreciation is stressed throughout. Many new concepts are presented in the 152 themes discussed in the book. An unusually effective organization and classification of material is utilized. A special feature is a twenty-eight page glossary.
277. ROBB, DAVID M., and GARRISON, J. J. *Art in the Western World*. New York: Harper & Bros., 1935. Pp. xxvi+708.
- A book on art history in which each of the three great arts—architecture, sculpture, and painting—are developed separately, thus presenting the main attribute of a single art at a time. In each case the authors show the intrinsic qualities of the art itself, the materials employed, the important techniques, the legitimate scope, and the great artists and their major works.

278. ROTHSCHILD, EDWARD F. *The Meaning of Unintelligibility in Modern Art*. Chicago: University of Chicago Press, 1934. Pp. xii+104.

A book aiming to eliminate some of the prejudice against so-called "modern art." It clarifies the vital elements of modern art in a reasoned discussion of its purpose and meaning. The book is divided into six parts, including the following subjects: I, "Introduction"; II, "Survey of Contemporary Culture"; III, "Individualism"; IV, "Revolution"; V, "Dematerialization"; and VI, "Conclusion."

279. WALSH, H. VANDERVOORT. *Understanding Architecture*. New York: Art Education Press, Inc., 1934. Pp. 24.

A concise treatise of the fundamental concepts of architecture. Furnishes basic guide-sheet material, a help in understanding the latest creations of the art, and centers interest in present trends and the future possibilities of architecture.

PHYSICAL EDUCATION*

C. H. McCLOY

University of Iowa

280. COZENS, FREDERICK W., and CUBBERLEY, HAZEL J. "Achievement Scales in Physical Education for College Women," *Research Quarterly of the American Physical Education Association*, VI (March, 1935), 14-23.

Presents performance scales which will apply both to the high-school age and to the college level.

281. CUBBERLEY, HAZEL J. "Achievement Scales in Athletics for College Women," *Research Quarterly of the American Physical Education Association*, VI (October, 1935), 113-18.

Simple standardized achievement tests which are as applicable to the senior high school as to the college.

282. DRIVER, HELEN I. *Tennis for Teachers*. Philadelphia: W. B. Saunders Co., 1936.

An excellent presentation of methods of teaching tennis to groups in the usual class organization.

283. DUGGAN, ANNE SCHLEY. *Tap Dances for School and Recreation*. New York: A. S. Barnes & Co., Inc., 1935. Pp. 104.

One of the best recent publications on dances for school use.

284. DYER, JOANNA THAYER. "The Backboard Test of Tennis Ability," *Studies in Physical Education Sponsored by the School of Education of Boston University*, pp. 63-74. Supplement to the *Research Quarterly of the American Physical Education Association*, VI (March, 1935).

* See also Items 603, 604, 605, and 606 in the list of selected references appearing in the November, 1935, number of the *Elementary School Journal*.

A simple test of a sport skill which can be administered to a relatively large number of players at the same time.

285. FRYMIR, ALICE W., and HILLAS, MARJORIE. *Team Sports for Women*. New York: A. S. Barnes & Co., Inc., 1935. Pp. xii+204.

A book that covers the techniques of baseball, basketball, hockey, soccer, speedball, and volleyball as played by girls and women. The material is well selected and presented without padding.

286. GOLDTHWAIT, JOEL E., BROWN, LLOYD T., SWAIM, LORING T., and KUHN, JOHN G. *Body Mechanics in the Study and Treatment of Disease*. Philadelphia: J. B. Lippincott Co., 1934. Pp. xiv+282.

A discussion of body mechanics by a group of eminent orthopedic surgeons. One of the few medical books in this field adapted to use by the physical-education profession.

287. KEENE, CHARLES H. "Should Pupils Be Excused from Physical Education? When? How? By Whom? Why?" *Journal of Health and Physical Education*, VI (November, 1935), 14-16.

An excellent discussion of this troublesome question by a physician who is an authority in the fields of physical education and of health.

288. MCCLOY, C. H. "A Program of Tests and Measurements for the Public Schools," *Journal of Health and Physical Education*, VI (October, 1935), 18-21.

A presentation of the present status of tests in the field of physical education, together with a fairly extensive bibliography listing only useful tests.

289. MASON, BERNARD S., and MITCHELL, ELMER D. *Active Games and Contests*. New York: A. S. Barnes & Co., Inc., 1935. Pp. viii+600.

An exceptionally well-selected group of games for school use at all grade levels. Rather too full, but at least complete.

290. MEISSNER, WILHELMINE E., and MEYERS, ELIZABETH Y. *Modern Basketball for Girls*. New York: Scholastic Coach Bookshop (250 East Forty-third Street), 1935. Pp. 56.

A brief but suggestive publication on basketball for girls. An addition to the material published in other books on the subject.

291. SIEVERS, HENRY. "A Simple Method of Detecting Abnormal Hearts by the Use of the Pulse-Ratio Test," *Research Quarterly of the American Physical Education Association*, VI (May, 1935), 31-38.

An apparently valid method for detecting defective hearts which can be used where expert medical service is not available.

292. STAFFORD, GEORGE THOMAS, DECOOK, H. B., and PICARD, J. L. *Individual Exercises*. New York: A. S. Barnes & Co., Inc., 1935. Pp. x+112.

An arrangement of activities for the correction of individual defects that represents much fruitful experimentation.

293. STALEY, SEWARD C. *The Curriculum in Sports*. Philadelphia: W. B. Saunders Co., 1935. Pp. 374.

A novel treatment of curriculum-building in physical education pointed primarily at the college level but also well adapted to the senior high school.

294. VAN HAGEN, WINIFRED. "What Are the Possibilities of Coeducational Physical Education in Secondary Schools?" *Journal of Health and Physical Education*, VI (September, 1935), 14-15.

A pertinent discussion in view of the increasing emphasis on leisure-time activities which will carry over into after-school life.

295. WAGNER, MIRIAM M. "An Objective Method of Grading Beginners in Tennis," *Journal of Health and Physical Education*, VI (March, 1935), 24-25.

A study of grading beginners in tennis applicable to most high-school situations.

Educational Writings

REVIEWS AND BOOK NOTES

Eye-movement photography applied to art.—The study of eye-movements accompanying reading revealed significant facts useful in diagnosing reading difficulties. The same laboratory that pioneered much of this work now offers a volume¹ deserving of thoughtful study by teachers, psychologists, aestheticians, and artists. Redesigning the apparatus has made possible accurate recordings of eye-movements in any direction—an advance achieved primarily by placing the camera at the left of the subject and splitting the beam of light reflecting from the cornea into two beams, one registering on a horizontally moving, the other on a vertically moving, film. A revolving fan provides a means for measuring the duration of fixation pauses by interrupting the light beam at intervals of one-thirtieth of a second. The project was aided by an appropriation from the Carnegie Foundation for the Advancement of Teaching.

The volume reports results on two hundred subjects who viewed fifty-five pictures of paintings, pottery, posters, furniture, tapestries, and other objects. About a fourth of the subjects were art students. Principal attention is given to study of "centers of interest" and both individual and group "patterns of perception." Other chapters present data on the duration of fixation pauses, variations in perception related to characteristics of the picture, variations related to individuals, and variations due to directions for looking at pictures. An appendix includes full-page illustrations of the pictures.

The results are presented in an ingenious manner, making it possible for the reader to see both the picture (a dim halftone print) and the course of visual exploration (thin black lines connecting numbered fixation points). By reference to figures below giving the length of each pause in thirtieths of a second in sequential order, the reader can easily follow the complete "pattern" of perception. Another method of presenting data on centers of interest utilizes the *density plot*, made by superimposing on a single dim print the fixations of many subjects, omitting lines. Considerable attention is given the duration of fixation pauses under various conditions and as applied to different subject matter. Beyond suggesting the theory of interventions of central processes, the author avoids com-

¹ Guy Thomas Buswell, *How People Look at Pictures: A Study of the Psychology of Perception in Art*. Chicago: University of Chicago Press, 1935. Pp. xvi+198. \$3.00.

mitting himself to further explanation. Interesting results are reported in connection with color versus black and white, comparisons of the records of children and adults and of art students with non-art adults, and response to a wide variety of subject matter.

The technique is essentially designed for obtaining objective evidence of the visual behavior of individuals in viewing pictures. The author, not an artist, commendably refrains from going beyond that objective. Yet tendencies to suggest possible divergences of his objective findings from assumptions and statements in the literature of art appear (pp. 7, 45, 79, 102, 108, 112-18). The reader should exercise critical judgment before coming to conclusions, since the evidence may suggest in different instances confirmation, divergence, or inconclusiveness.

The chief limitation of the technique appears, to the reviewer, to be that of any strictly objective procedure: it leaves to inference the "inner response" of the subject. If appreciation is the perception of significant aesthetic relations or values in an organization of forms, it can hardly be identical with visual exploration. For complete perception, therefore, recourse may have to be made to some additional confirmatory, explanatory, or interpretative data. This limitation the author frankly recognizes. Undoubtedly, the technique holds great promise for further study. One would wish to see it applied to examples of "great art," to works having definite "movement" and "tensions" in content organization, and to works built on definite aesthetic principles and qualities. Consistency in repetition should also be studied.

The book is especially commended for its careful statement, for the workman-like manner of presentation of its data, and as an advance in the literature of perception which no interested person should overlook.

NORMAN C. MEIER

UNIVERSITY OF IOWA

Enduring elements in vocational guidance.—Frequently in educational literature, as in countless other fields, a term is chosen to designate or to describe a new enterprise or venture which has special significance or to which a new emphasis is attached. The more appropriate the term or the more timely its selection, the greater the likelihood of its being borrowed or re-adapted for uses not originally intended, until there is danger that the special meaning will be lost or entirely misapplied. Such a term is "vocational guidance," formerly conveying a specific connotation but long since divided and diverted almost to the point of complete oblivion.

When such a situation has come to exist, two alternatives are open to the advocates of the cause represented: (1) Amalgamation with the general movement may be accepted as the irretrievable outcome. (2) The picture may be redrawn with renewed vividness sufficient to bring out clearly the original vision in all its colorful detail. Precisely when vocational guidance was becoming vaguely

mixed with all other kinds of guidance and when many were seeking to go a step farther and say that, after all, guidance is just education, John A. Fitch and his associates have chosen the second of these alternatives in their presentation of an up-to-date picture of the situation.¹

The book is made up of four distinct divisions in a single volume. Part I contains two chapters by way of introduction, beginning with a definition of vocational guidance and its general setting and proceeding to point out the logical relations which are believed to be desirable with other kinds of guidance. Functionalizing activities in the field are designated as (1) counseling, (2) placement, and (3) research. Vocational guidance is shown to be conducted by numerous agencies other than the schools, where the chief emphasis is usually put on counseling rather than placement. The introduction concludes that this sort of service is a highly practical and applied form of social work and recommends the case-work method as the most effective method.

Part II deals entirely with the matter of counseling, pointing to the beginnings under private auspices and crediting the present gains mainly to efforts within the schools. Organization and methods are shown to present a wide variety, resulting from a tendency to grow out of local necessities. The duties of the counselor are pictured as embracing practically everything in the school except formal classroom teaching, and they are evaluated as indispensable because of the extremely personal nature of the service. Qualifications of the counselor are made to include desirable social attitudes, education, and practical experience, and it is considered necessary that the qualifications of this officer be more comprehensive than those of any other person on the entire educational staff. Various chapters are devoted to detailed presentations of separate aspects of the counselor's preparation, duties, conditions of work, and responsibilities.

Part III is devoted to placement, which is shown to be older than the more formal programs of guidance by other means. It is set forth as guidance into a job, not into a career. Placement counselors are charged with duties different from those of other counselors, and different requirements of preparation and knowledge are imposed upon them. Treatments are given to placement offices, other social agencies, junior placement organizations, registering and interviewing, referral and follow-up, dealing with the employer, and placing the handicapped. This section of the book occupies somewhat more space than that given to counseling and carries the impression of a corresponding ratio in importance.

The final division is composed of two sets of appendixes, one on counseling and one on placement. Each contains a wealth of valuable material for helpful reference in actual practice.

As a whole, this book embodies the publication of a typical survey or statistical study. A distinguishing feature, however, which renders it more readily

¹ John A. Fitch, *Vocational Guidance in Action*. Job Analysis Series of the American Association of Social Workers, No. 5. New York: Published for the American Association of Social Workers by Columbia University Press, 1935. Pp. xviii+294. \$2.75.

usable than the ordinary book of that nature, is found in a concise statement at the beginning of each chapter giving the gist or essence of its contents. Even though the subject treated is shown as lacking standardization, the organization of the book itself is highly standardized. The methods of presentation adopted for use in the beginning are carried through the entire work, reading, study, and reference being thus facilitated.

In actual use this book should be chiefly valuable to (1) persons contemplating the organization of a guidance service, (2) those interested in comparing an established service with general practice, and (3) students or other young persons anticipating any phase of guidance work as a vocation. To each of these and to others the authors present a clear picture of the situation as it is and point the way, as well as can be done, toward better standards and practices.

DEAN M. SCHWEICKHARD

ASSISTANT SUPERINTENDENT OF SCHOOLS
MINNEAPOLIS, MINNESOTA

Advanced consumer education.—The public seems to be increasingly interested in providing adequate training in consumer knowledge and in the major economic problems of the day. Textbooks in junior business training have done something to teach common business activities, but the pupils of junior high school age are too young and too inexperienced to master some of the more complicated problems often presented. A new book¹ supplements junior business training and presents in an interesting manner a number of significant economic problems about which everyone should be informed.

The authors have avoided a theoretical treatment of economic principles but have discussed pro and con such vital matters as wealth, distribution of income, budgeting and record-keeping, money management, risk, efficient buying of goods, the selection of a home, taxes, financial markets, price determination, credit, and the organization and operation of business.

The section on the organization of business seems to be more vocational in nature than does the remainder of the book. It would seem that the information contained in a book of this type should be taught to all high-school pupils, not merely to commercial pupils; hence the vocational section seems a bit out of place. The book covers a great deal of ground and may possibly be considered a bit too heavy for high-school pupils. Among the many valuable sections are the description of the numerous agencies providing information for consumers and the section which attempts to teach how to evaluate misleading advertisements and how to avoid frauds, rackets, and other specific consumer pitfalls. These sections alone make the book very much worth while.

This textbook is a pioneer in the new field of consumer and economic citizen-

¹ H. G. Shields and W. Harmon Wilson, *Business-economic Problems*. Cincinnati, Ohio: South-Western Publishing Co., 1935. Pp. x+714. \$1.84.

ship training. Probably the next few years will see a score of similar publications, but, of the half-dozen or so already on the market, this book seems to the reviewer to be by far the best.

E. G. BLACKSTONE

UNIVERSITY OF IOWA

Emphasizing functionality in algebra.—As a result of the many studies and investigations in the field of mathematics, definite changes have taken place in the instructional materials, particularly in the materials for elementary algebra. The manipulative side of algebra cannot, of course, be radically altered, since the algebraic operations and processes are definite and formal, but they can be so organized that they become means toward a particular objective, namely, understanding the meaning and the nature of algebraic concepts. The various concepts of algebra are manifestations of the fundamental idea of functionality. Textbooks in algebra have undergone noted changes and improvements emphasizing functionality.

Two new textbooks¹ in first-year algebra emphasize functionality both in organization and in treatment. Special chapters are devoted to such phases of functionality as relationships, tables, graphs, formulas, equations, proportionality, and variation. Even in the chapters on the fundamental processes, the idea of change, dependence, and variation is kept in mind and adequately illustrated. Thus, algebra becomes a study of functionality with definite methods of procedure in the analysis of all quantitative relationships. The instructional values derived from the study of such a course tend toward the development of a scientific attitude which can be used to advantage in other fields of reflective thinking.

Additional features which are characteristic of both textbooks are practice exercises and tests of various forms to be used in determining the progress of learning and in the evaluation of instruction.

J. S. GEORGES

WRIGHT CITY JUNIOR COLLEGE, CHICAGO, ILLINOIS

Control of public education by the state.—During the years of depression the question has forcibly arisen whether relief should be granted by the national government to states without means to furnish adequate education to the children of its citizens. Education, since the beginning of the nation, has been a function of the individual state. This fact is reiterated in a monograph summarizing the law on the question,² which gives consideration to (1) debates in

¹ a) Harry C. Barber and Elsie Parker Johnson, *First Course in Algebra*. Boston: Houghton Mifflin Co., 1935. Pp. vi+426+xiv. \$1.24.

b) C. Newton Stokes and Vera Sanford, *First Course in Algebra*. New York: Henry Holt & Co., 1935. Pp. vi+440. \$1.28.

² Lee O. Garber, *Education as a Function of the State: Its Legal Implications*. Minneapolis, Minnesota: Educational Test Bureau, Inc. Pp. viii+100.

thirty-seven state conventions preceding the adoption of state constitutions and (2) court decisions bearing on the question rendered in forty-six of the forty-eight states. This summary of the law shows that education is a function of the state rather than the individual district or the nation.

It would have been interesting had the author shown trends in the development of American educational thought by pointing out the distinctions in the debates in the constitutional conventions held at early dates and those held later. While dealing only in a general way with the constitutions adopted between 1820 and 1925, he no doubt found that those of later date contained considerably more details regarding education than did those adopted earlier. It is likely, too, that in the earlier debates more objections were heard to the state's furnishing higher education rather than confining its efforts to the common branches.

Most of the monograph (seven of its nine chapters) deals with decisions of the higher courts. Numerous cases are cited in support of the conclusions that the authority of state legislatures, limited only by state and federal constitutions, is supreme; that, although municipalities or *voluntary* corporations and school districts created by the legislature are commonly granted authority to look after schools, they are, while so doing, quasi-municipal or *involuntary* corporations and as such are subject to the will of the legislature; that they possess only such authority as is granted to them by the legislature; that, since school property is state property, the local authorities may not dispose of it; that, since the state is not liable for damages in torts, school officers, who are state officers, are not liable for torts committed in the performance of discretionary duties where performed in good faith and without malice; and that, while the legislature may grant to the district authority to levy and to collect taxes within its boundaries for school support, these are nevertheless state taxes.

The author shows clearly that education is a function of the state even though its duties are often performed by officials elected specifically for other local purposes. Each chapter contains a summary, and the concluding chapter is a summary of the whole. Perhaps in his attempt at emphasis, the author has repeated ideas more often than is necessary, at least without a change in words.

EDWIN S. LIDE

SULLIVAN HIGH SCHOOL, CHICAGO, ILLINOIS

Recent innovations in the teaching of the social sciences.—During the past dozen years a number of new plans of instructional procedure have been adopted by teachers of the social sciences throughout the country. Persons seeking a concrete description and a critical evaluation of a few of these plans will welcome the appearance of a volume¹ which came from the press some months ago. The authors of this volume center their attention on the following so-

¹ M. J. Stormzand and Robert H. Lewis, *New Methods in the Social Studies*. New York: Farrar & Rinehart, Inc., 1935. Pp. x+224. \$1.75.

called "innovations" in the teaching of the social sciences: "The Unit Plan," "Workbooks and Study Guide Tests," "The Problem Method as Based on Current Events," "Socializing Class Methods," "Laboratory Methods and Visual Aids," and "Integration of the Social Studies with English." To each of these innovations a chapter is devoted. These six chapters are supplemented by two others, one containing an evaluation of some of the more common traditional practices in teaching the social sciences and the other giving consideration to objectives in the social sciences with respect to their influence on the curriculum and methods discussed in the volume.

In discussing the various aspects of the new movements considered in their volume, the authors employ a mixture of facts and opinions. They do not hesitate either to condemn or to praise, and they feel free to offer suggestions for improvement. Their discussion throughout is stimulating and provocative. In each chapter the reader finds many concrete, specific, and practical suggestions. Examples of these are the twenty socializing experiences listed in chapter iv and the list of thirty-five pupil activities included in chapter i.

For those who desire to pursue the topics discussed in the various chapters beyond the treatment presented by the authors, there is provided a bibliography of books and articles for each chapter. It seems fair to remark that too few of the articles have appeared since 1929 and that too many of the books are in the field of general education.

R. M. TRYON

Modern economic and social history for secondary schools.—Miss Perret¹ has tried to explain life today to industrial-arts pupils, boys in carpentry and automobile mechanics and girls in courses in art, weaving, dressmaking, and design. Industrial history predominates, but considerable attention is given to agricultural development and related social conditions are described to some extent.

In the first half of the volume five pages are devoted to ancient progress, some twenty pages to the medieval manor, and thirty to medieval towns. Two chapters are assigned to the beginning of modern science and to education and the printing press. Then follow rather more substantial treatments of the commercial and agricultural revolutions, the Industrial Revolution and its results, and modern science. A hasty and incomplete survey of modern political history is inserted. The second half of the book considers power, transportation and communication, natural resources, farming, big business, imperialism, and industrial workers. In these chapters attention is focused chiefly on the United States, with frequent reference to Europe and occasional mention of other parts of the world.

The Preface notes that each of the eighteen chapters was written as an independent unit. Some gain in clarity no doubt results, but agricultural, industrial,

¹ Eleanor Perret, *Man's Work and World: A History of Industry*. Boston: D. C. Heath & Co., 1935. Pp. xvi+586+maps. \$2.12.

and commercial changes have actually been more closely related than is indicated in this book. A great many facts have been presented, often because of space limitations, in highly condensed form—as, for example, the spread of democracy in nineteenth-century England. Competent teaching can, of course, both provide fuller treatment in such cases and point out the relations between the changes recorded in the various units.

Many illustrations have been used. These have been chosen with care, although their usefulness could have been much increased by explanatory material and fuller comment. A summary is provided at the end of each chapter, followed by questions, problems, and somewhat perfunctory projects. Twenty possible models to be made by pupils are suggested. There is obvious effort to stimulate thought and to use the specialized knowledge and training of pupils. Two or three “books that tell more” are cited at the beginning of each chapter. Davis’ *A Day in Old Rome* and *Life on a Medieval Barony*, Van Loon’s *Story of Mankind*, Harold Lamb’s *The Crusades*, Chase’s *Men and Machines*, and Slosson’s *Creative Chemistry* are typical of the few works so suggested. A rather uneven six-page bibliography, primarily for teachers, is appended. Many excellent titles are given, although the works of Mumford and Preserved Smith, Tickner’s *Social and Industrial History of England*, and Usher’s *History of Mechanical Inventions* are among those omitted.

Eleven political maps in color are collected at the end; no physical or economic maps are provided. The print is large, the pages uncrowded, and the binding attractive.

All textbooks in history suffer from the need for condensation; teachers will differ in their preferences for illustrations, references, and other teaching aids. It seems clear, however, that Miss Perret has made a useful and stimulating selection of material for a large and important group of pupils. She has also adopted a more truly world view of modern history than most writers of textbooks have achieved.

ERLING M. HUNT

TEACHERS COLLEGE, COLUMBIA UNIVERSITY

Making physics intelligible to the college Freshman.—Professor Stephenson has, in his recently published book,¹ put into concrete form much of the skill and charm which he must often have demonstrated in his teaching experience in physical science. All excellent instructors have ways and means of interesting their students in the fields in which they instruct, but seldom do they succeed in putting even a portion of these into printed form. With the assistance of the illustrator, Chichi Lasley, Professor Stephenson has been able to instil into the problems of physics an “everydayness” and an interest which are often lacking in textbooks in physics.

¹ Reginald J. Stephenson, *Exploring in Physics: A New Outlook on Problems in Physics*. Chicago: University of Chicago Press, 1935. Pp. xiv+206. \$1.50.

Beginning with the subject of speed and acceleration, the author presents an array of problems and methods of attack which carry the general student as far as he wants to go in the realms of motion, work and energy, atmospheric and fluid pressure, heat and its phenomena, light, sound, and electricity. The last group of problems brings the student to the very pinnacle in the field of research activity in physics, namely, waves and particles and the conundrum of the identification of each in electromagnetic radiations.

The book is intended as a supplement to *From Galileo to Cosmic Rays*, written for and used in the general introductory course in science at the University of Chicago. As in the earlier book, which was written by Professor Harvey B. Lemon, the cartoon effect of the illustrations at once strikes the reader as a significant and appealing departure from the conventional textbook. The lady stepping from a rowboat to the dock looks as though she will not quite make it because she has forgotten to take into consideration the automatic operation of Newton's third law of motion. "Quite a jolt" is the unexpected kick of the gun to the young lad who didn't appreciate the same law. Equally amusing and instructive is the cartoon of the schoolmaster at a blackboard demonstrating how to change a Fahrenheit to a centigrade thermometer reading. Illuminating and entertaining illustrations such as these are interspersed at frequent intervals.

This intriguing book brings physics problems down to earth. As one interested in research, the reviewer would like to have test, questionnaire, and other data to show how the new treatment works with college Freshmen. It should help some college students a great deal.

A. W. HURD

NORTHERN MONTANA COLLEGE, HAVRE, MONTANA

A co-operative book list for the senior high school library.—If the school library is to function effectively, the librarian must have an understanding of the school, its objectives, and its program. Likewise, teachers must be aware of the contributions which the library can make to their work. In recent years this dependence of libraries and librarians upon teachers and administrators and the dependence of teachers and administrators upon libraries and librarians has been increasingly recognized. If the emergence of progressive school libraries is characterized by any one development, it is that of teacher-library co-operation. Co-operative action is found not only in individual schools but also in the professional meetings of librarians and educators. More and more are library problems discussed at conferences of educators; more and more are educational problems considered at conferences of librarians. This co-operative tendency has also resulted in the formation of a number of joint committees composed of librarians and educators, the purposes of which are to study problems to the solution of which both groups must contribute.

Representative of the contributions which such committees can make is a

recently published booklist¹ prepared by a joint committee of the American Library Association, the National Education Association, and the National Council of Teachers of English. This list of one thousand selected books for senior high school libraries is intended as an aid to book selection, particularly for the small high school. The committee does not recommend the blanket purchase of the books included in the list; purchases should be made, says the committee, only in light of the needs of the individual school.

In any general list of books limited to one thousand volumes, questions might be raised about the inclusion of certain titles and the omission of others. Such speculation is fruitless, however, for no two committees would select the same titles. Another committee might, for example, include Hamsun and omit Rølvaag. It might list fifteen or twenty collections of short stories instead of the six in the present list. It might have included the poetry of Edna St. Vincent Millay and omitted that of Robert Frost. In general, the selection of books included in this list is excellent. Some persons may disagree with the emphasis on contemporary books—in the field of literature, for example—but the reviewer is in full sympathy with this tendency.

An important factor in the usefulness of any book list is its arrangement. This list is arranged by subjects according to the Dewey classification. The price, the publisher, and a brief annotation are given for each title. An excellent index (author, title, and subject) makes an important contribution to this usable tool.

The question might be asked: Why were English teachers represented on the joint committee which prepared this book list, while teachers of the social studies and of the natural sciences were omitted? The committee has undoubtedly consulted teachers in these fields, for both the social studies and the natural sciences are well represented in the list.

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CURRENT PUBLICATIONS RECEIVED

GENERAL EDUCATIONAL METHOD, HISTORY, THEORY AND PRACTICE

AVERILL, LAWRENCE AUGUSTUS. *Adolescence: A Study in the Teen Years*. Boston: Houghton Mifflin Co., 1936. Pp. vi+496. \$2.25.

FARGO, LUCILE F. *Preparation for School Library Work*. Columbia University Studies in Library Service, III. New York: Columbia University Press, 1936. Pp. viii+190. \$3.00.

HIGGINS, SISTER M. XAVIER. *Reducing the Variability of Supervisors' Judgments: An Experimental Study*. Johns Hopkins University Studies in Education, No. 23. Baltimore: Johns Hopkins Press, 1936. Pp. x+70. \$1.15.

¹ 1000 Books for the Senior High School Library. Compiled by a Joint Committee of the American Library Association, National Education Association, and National Council of Teachers of English. Chicago: American Library Association, 1935. Pp. 96. \$1.00.

- JERSILD, ARTHUR T., and BIENSTOCK, SYLVIA F. *Development of Rhythm in Young Children*. Child Development Monographs, No. 22. New York: Teachers College, Columbia University, 1935. Pp. vi+98.
- JERSILD, ARTHUR T., and HOLMES, FRANCES B. *Children's Fears*. Child Development Monographs, No. 20. New York: Teachers College, Columbia University, 1935. Pp. xvi+356.
- JERSILD, ARTHUR T., and MARKEY, FRANCES B. *Conflicts between Preschool Children*. Child Development Monographs, No. 21. New York: Teachers College, Columbia University, 1935. Pp. x+182.
- MARKEY, FRANCES V. *Imaginative Behavior of Preschool Children*. Child Development Monographs, No. 18. New York: Teachers College, Columbia University, 1935. Pp. xvi+140.
- Selected References in Education, 1935*. Supplementary Educational Monographs, No. 43. Chicago: Department of Education, University of Chicago, 1936. Pp. x+198. \$0.90.

BOOKS PRIMARILY FOR HIGH-SCHOOL TEACHERS AND PUPILS

- BARTKY, WALTER. *Highlights of Astronomy*. Chicago: University of Chicago Press, 1935. Pp. xiv+280. \$2.50 (stellarscope, \$2.00 extra).
- COYLE, LILLIAN S., and EVANS, WALTER P. *Our American Heritage: From Subject to Citizen*. New York: McGraw-Hill Book Co., Inc., 1936. Pp. xx+404. \$1.36.
- Graded List of Books for Children*. Compiled by a Joint Committee of the American Library Association, National Education Association, and National Council of Teachers of English. Chicago: American Library Association, 1936. Pp. x+162. \$1.75.
- HOOVER, CAROL. *Following Printed Trails: Things To Learn about Reading*, pp. x+372, \$1.32; *Comprehension Tests for "Following Printed Trails" and Key to Tests*, pp. 26. Boston: D. C. Heath & Co., 1936.
- KINNEMAN, JOHN A., BROWNE, RICHARD G., and ELLWOOD, ROBERT S. *The American Citizen: A Textbook in Government and Current Problems*. New York: Harper & Bros., 1936. Pp. viii+562. \$1.68.
- STRANG, RUTH, assisted by MABEL GUDE, HELEN QUEEN STEWART, MARY DAWSON, and AGNES MATTHEWS. *Study Type of Reading Exercises*, pp. viii+112; *Improvement of Reading in Secondary Schools: Teachers' Manual To Accompany the "Study Type of Reading Exercises"*, pp. 20. New York: Teachers College, Columbia University, 1935.
- THOMAS, HAROLD P., and PARTCH, CLARENCE E. *Work Guide for the Study of Occupations*. Boston: Houghton Mifflin Co., 1936. Pp. iv+156. \$0.60.
- TRYON, ROLLA M., LINGLEY, CHARLES R., and MOREHOUSE, FRANCES. *The American People and Nation*. Boston: Ginn & Co., 1936 (revised). Pp. xviii+684+xl. \$1.72.
- World Writers: A Book of Readings by Types*. Edited by William L. Richardson. Boston: Ginn & Co., 1936. Pp. xvi+628. \$2.00.

PUBLICATIONS OF THE UNITED STATES OFFICE OF EDUCATION
AND OTHER MATERIAL IN PAMPHLET FORM

- Better Reading Instruction: A Survey of Research and Successful Practice.* Research Bulletin of the National Education Association, Vol. XIII, No. 5. Washington: Research Division of the National Education Association, 1935. Pp. 273-325.
- BURROW, CLAYTON, with the assistance of CORINNE A. SEEDS, LAVERNA LOSSING, and NATALIE WHITE. *Community Life in the Harbor.* Curriculum Units for Elementary Schools, No. 1. Department of Education Bulletin No. 16. Sacramento, California: State Department of Education, 1935. Pp. viii+84.
- Business Education and Money Management.* Proceedings of the University of Chicago Conference on Business Education, 1935. Chicago: University of Chicago Press, 1935. Pp. 116. \$0.50.
- The Contribution of the Sciences.* Proceedings of the Second Institute on the Exceptional Child under the Auspices of Child Research Clinic of the Woods Schools at Langhorne, Pennsylvania, Tuesday, October 15, 1935. Langhorne, Pennsylvania: Child Research Clinic of the Woods Schools, 1935. Pp. 80.
- DALE, EDGAR. "Teaching Motion Picture Appreciation: An Account of a Series of Demonstrations in Forty-five Selected Pennsylvania Cities." Columbus, Ohio: Bureau of Educational Research, Ohio State University, 1936. Pp. 22 (mimeographed).
- Educational Tests and Their Uses.* Review of Educational Research, Vol. V, No. 5. Washington: American Educational Research Association of the National Education Association, 1935. Pp. 441-535.
- Inexpensive Books for Boys and Girls.* Compiled by the Book Evaluation Committee of the Section for Library Work with Children of the American Library Association. Chicago: American Library Association, 1936. Pp. 44. \$0.50.
- NOLL, VICTOR H. "What Do You Think?" pp. 4. *The Habit of Scientific Thinking: A Handbook for Teachers, Including a Manual To Accompany "What Do You Think?" A Test of Scientific Thinking*, pp. 28. New York: Teachers College, Columbia University, 1935.
- Proceedings of the Twelfth Annual Educational Conference, University of Kentucky.* Bulletin of the Bureau of School Service, Vol. VIII, No. 2. Lexington, Kentucky: College of Education, University of Kentucky, 1935. Pp. 136. \$0.50.
- Recent Issues of the Office of Education:
Bulletin No. 5, 1935—*Bibliography of Research Studies in Education 1933-1934* prepared by Ruth A. Gray. Pp. xiv+328.
- TAYLOR, HOWARD R., and CONSTANCE, C. L. "Chances of Graduation from College in Terms of Preparatory-School Scholarship." Personnel Research Bureau Bulletin No. 18. Eugene, Oregon: University of Oregon, 1935. Pp. 4 (mimeographed).

